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THE
NEW YORK
MEDICAL AND PHYSICAL
JOURNAL.



CONDUCTED BY
DANIEL L. M. PEIXOTTO, M. D.

VOL. II.—NEW SERIES.

NEW YORK:
CHARLES S. FRANCIS—252 BROADWAY,
AND LITTLE & CUMMINGS, ALBANY.

1830.

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DR. COX'S INSTRUMENT.



Fig. 1.

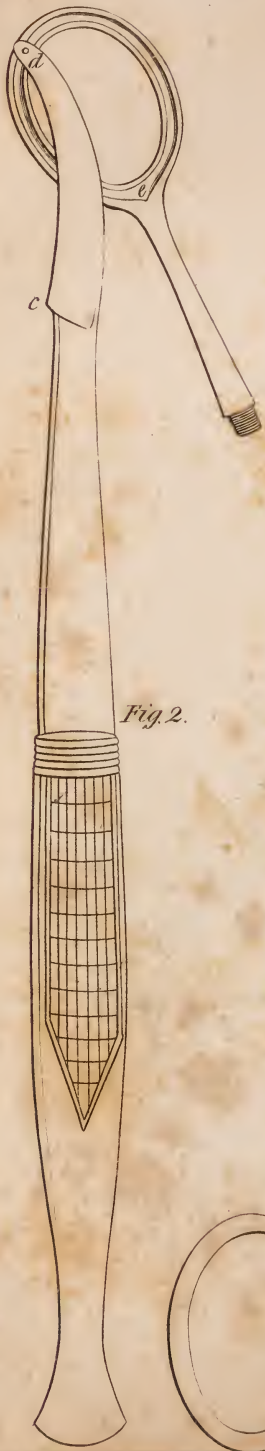


Fig. 2.

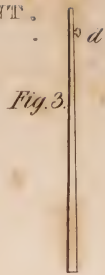


Fig. 3.



Fig. 4.



Fig. 5.

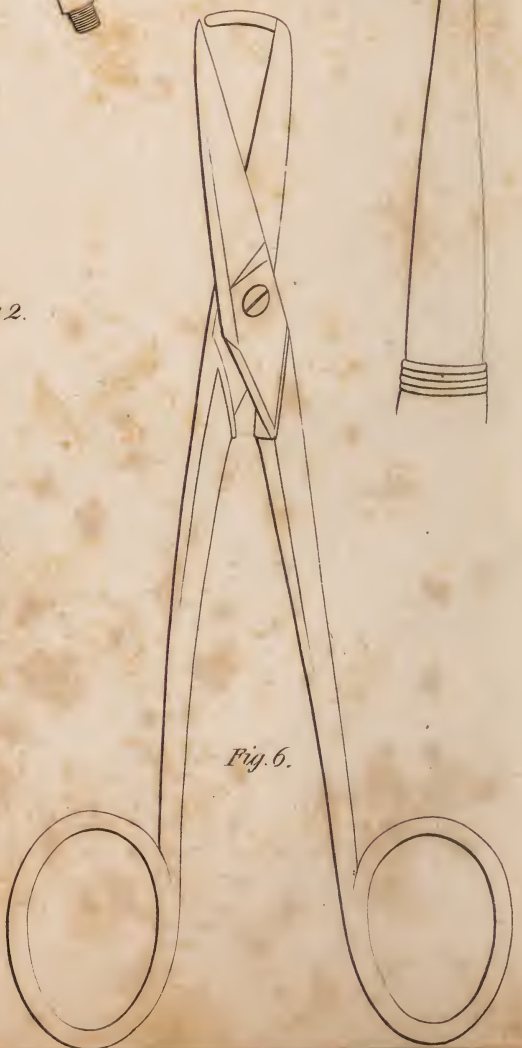


Fig. 6.

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(Continued from the last number.)

THE philanthropic John Howard, in his work on Lazarettos, p. 25, remarks, that "The governor, at the French hospital at Smyrna, told me, that in the last dreadful plague there, his house was rendered almost intolerable by an offensive scent, especially if he opened any of those windows which looked toward the great burying ground, where numbers were left, every day, unburied; but that it had no effect on the health of himself or his family. An opulent merchant, in this city, adds he, likewise told me that he and his family had felt the same inconvenience, without any bad consequences."*

In the Edinburgh Medical and Surgical Journal, of October, 1810, is an account, given by Dr. Chisholm, of a manufactory at *Conham*, near Bristol, destined for the conversion of animal flesh into a substance resembling spermaceti, by cutting up dead horses, asses, dogs, &c. and putting their muscular parts into boxes with holes for the admission of water, and afterwards placing them in pits filled with water; while the entrails and useless parts of many hundreds of carcasses, were left to putrefy on the surface of the ground. The effluvia of these putrefying animal matters were highly offensive to the overseer of this manufactory, and to the workmen employed under him, as well as to others within their

* Bancroft, p. 97.

reach, yet no injury was done to the health of any person during the two years in which these operations were continued.”*

In addition to these strong facts, and many others equally so, which we deem it unnecessary to mention, we may add that in no one instance that we have heard of, has typhus fever been attributed to the concentrated and putrid effluvia arising from the numerous dead bodies in the dissecting rooms attached to the different medical colleges in this and other countries. These facts are considered sufficient to prove that fever of no kind or description ever arises from animal putrefaction.

The next assertion, that typhus fever is produced by the effluvia arising from crowding healthy persons into close and ill ventilated places, is equally destitute of foundation. This is an almost universal opinion. We can hardly take up any work on the subject, in which we do not find this set down as one of the causes of typhus. Cullen, Chisholm, Good, and Wilson, all mention human effluvia as one of the causes of this fever. Cullen remarks, that “the effluvia constantly arising from the human body, if long retained in the same place without being diffused in the atmosphere, acquire a singular virulence; and in that state being applied to the bodies of men, they become the cause of a fever which is highly contagious.” Chisholm says, “the cause, in fact, of *typhus*, is, I believe, an undefined change in the atmospheric air, brought about by its confinement in a very limited space, and incapacity, in a great degree, of renewal, and the respiration of an effluvia, emanating from the persons inhabiting the wretched close dwellings in which fever is found.”† Good, when speaking of the causes of typhus, remarks, that “its common cause is febrile miasm, issuing from the decomposition of human effluvia, under the influence of the ordinary auxiliaries of a close and stagnant atmosphere.”‡ Wilson, likewise, says, that “the effluvia of the living body, become putrid by stagnation, are capable of producing it,”|| i. e. typhus fever. We see, therefore, that the ablest writers on medicine have adopted and published this opinion; and when bolstered up by such authority, it is not surprizing that it should have become so general. Bancroft, however, by a series of the most undoubted and convincing facts, has completely overturned this opinion, and has proved, beyond cavil or doubt, that it is never productive of typhus fever. We will select the most striking of the facts recorded on this subject.

* Bancroft, p. 442.

† Ibid, p. 99.

‡ Study of Medicine, vol. 2, p. 124.

|| On Fevers, vol. 1, p. 154.

“The people of the island of Oonalaska inhabit jourts, or subterraneous dwellings, each common to many families, in which they live in horrible filthiness.” (Pennant’s Arctic Zoology, vol. 1.) “And the Samoiedes live in subterraneous dwellings, equally filthy, for almost nine months in the year, who are yet reported by travellers to be strong, active, and healthy. In addition to all this filth, crowding, and want of ventilation, the *food* of these people may be considered as little better than putrefaction itself.” Mr. Pennant, describing that of the natives of Kamschatka, says, “their ambrosial repast is the huigal, or fish flung into a pit, until it is *quite rotten*, when it is served up in a state of carrion, and with a stench that is insupportable to every nose but that of a Kamschatkan.* These people, notwithstanding their mode of living, do, with the exception of the scurvy, enjoy good health.

“The Greenlanders and Esquimaux appear, by the accounts of those celebrated navigators, Davis, Frobisher, Baffin, Henry Ellis, &c., as well as Bishop, Egede, and Crantz, to live during the greater part of the year in very close, ill ventilated, and crowded habitations, (without chimneys,) which, notwithstanding the great severity of the cold, they keep extremely warm by their numbers and breath, assisted by a single burning lamp in each, and by excluding fresh air so completely, that any other people would think themselves in danger of being suffocated by the offensive vapors continually exhaling from the lungs and bodies of the inhabitants, and which involve them as a thick fog; and yet fever of any kind is a rare disease among these people, though, like those of Kamschatka, &c. they are much disposed to scurvy.”†

Dr. Mathew Guthrie, physician at St. Petersburg, in a letter to Dr. Priestly, mentions, that “the Russian boor lives in a wooden house, caulked with moss, so as to be snug and *close*. It is furnished with an oven which answers the triple purpose of heating the house, dressing the victuals, and supporting on its flat top the greasy mattrass on which he and his wife lie.”

“During the long severe winter season, the cold prevents them from airing this habitation, so that the air cannot be very pure, considering that four, five, or six people eat and sleep in one room, and undergo, during the night, a *most stewing process* from the heat and closeness of their situation, insomuch that they have the appearance of being dipped in water, and raise a steam and smell in the room, not offensive

* Bancroft, p. 100.

† Ibid, p. 101.

to themselves, but *scarcely supportable* to the person whom curiosity may lead thither."

"Now, if it be considered that this *human effluvium* must adhere to every thing in the room, especially to the sheep skins or mattrass on which they sleep, the moss in the walls, &c., and that the apartment is never ventilated for six months, at least; at the same time that these people are living upon salt fish, and the whole time without fresh vegetables, &c.—if it be a fact that they are, in spite of all these predisposing causes, *strangers to putrid disease*, it will sufficiently justify my first assertion, that the regimen nature has dictated to these people, is highly antiseptic."

Bancroft remarks, that "Dr. Guthrie has stated these facts principally to show the supposed beneficial effects of the Russian drink called quass, &c. ; but I am entitled to avail myself of them for the purpose of demonstrating that long confinement in close unventilated houses, without chimneys, in an atmosphere replete with human effluvia, and in very cold weather, when typhus or contagious fever is commonly most prevalent, does not produce that disease, it being, as will hereafter appear, unknown in that part of the world."* From these facts we learn that the effluvia arising from the crowding of healthy persons into close and unventilated situations, in cold countries, at least, is not productive of fever; and upon examination, we shall find that the same cause is equally innocuous as regards the production of typhus fever in warmer regions of the globe.

The African slave ships present striking examples of this fact. "The poor wretches (says Lind, in his treatise on jail distemper) are crowded together below the deck, as close as they possibly can lie, with only a small separation between the men and women; every night they are shut up under close hatches, in a sultry climate, barred down with iron to prevent an insurrection; and though some have been suffocated by the close confinement, or foul air, though they are subject to the flux, and suffer from a change of climate, yet an infection is scarce known among them; or if an *accidental* fever, occurring from the change of climate, should become infectious, it is generally much more mild than in the opposite situation," i. e. that of ragged felons under transportation. Bancroft remarking upon this statement, says, "that Dr. Lind, influenced, as he was, by the commonly received opinions, mentions an infection (meaning fever) as being '*scarce known*' in the slave ships, instead of asserting, as he might

* Bancroft, p. 102.

have done with truth, that it is *never known*; for, (continues Bancroft,) after very extensive enquiries, I am fully convinced that fever of any kind rarely occurs on board these vessels, and *contagious fever never*."

A striking instance of the harmlessness of the effluvia arising from the excessive crowding of persons into confined and close situations, may be found in the "Narrative of the deportation to Cayenne," of J. J. Job. Aimé, and one hundred and ninety-two other persons, on board the *Decade* frigate, in consequence of the revolution (in France) of the 18th Fructidor, (Sept. 4,) 1797, written by himself, and printed in 1800. In this narrative the writer says, "we were placed in the between decks, before the fore mast and main mast, occupying nearly one fourth of the superficies of the vessel, having about four feet and a half in height, and receiving no light but by the scuttles; that is to say, by two openings of three feet square."

"In this place, the door of which was locked, were crowded and squeezed together one hundred and ninety-three individuals, mostly aged and infirm. We lay in two rows, one over the other, forming, as it were, two stories, in hammocks of coarse cloth, and extremely narrow. Those below could not raise their heads without hitting those above; neither could any of us make the smallest motion without disturbing his neighbors; for we all touched each other, and not having the least spare room, formed, as it were, but one mass. And that nothing might be wanting to increase the horror of our situation, as we were not permitted to go out for fourteen hours together, (i. e. from 6 P. M., until 7½ A. M.,) and sometimes more, tubs had been placed in the midst of us, where we might satisfy the indispensable wants of nature; and to get to these sorry receptacles, we were obliged to creep on our bellies beneath the hammocks. How insupportable then must have been the infection of such a close confined place, which was already poisoned by our own exhalations! Indeed, the air which passed from this hole was so hot and fetid, that the sentinels placed at the hatchways as our guard, demanded that the time of their duty, at so dangerous a post, might be shortened."

In addition to all this, they "were condemned to subsist on the coarsest and the most disgusting half putrefied food," and "to endure the greatest and most offensive personal filth."* Yet, notwithstanding this combination of the most disgusting and distressing circumstances imaginable, nothing like conta-

* Bancroft, p. 105-6.

gious fever manifested itself, although they were kept in this state for ninety-six days. If "crowding, want of ventilation, filthy clothing, and unwholesome, corrupting food, together with anxiety and dejection of mind," could have generated the contagion of typhus, it ought to have been present here in its most concentrated state.

Dr. Lind, in his essay on preserving the health of seamen, says, that "the surgeon of the Panther (of sixty-four guns) told me, that forty of her men had died of the scurvy on their passage home," (from the West Indies,) "and that during that time there were usually ninety patients in the sick apartment. The place appropriated for the sick was in the bay of the ship, and had no pipe from the ventilator, nor any scuttles cut through its sides for the admission of the fresh air. A number of patients, thus closely crowded together, rendered the place so disagreeable and suffocating, that the sick were in a manner stifled for want of air. The surgeon, when visiting, could scarcely breathe in it, or remain for any length of time, without being obliged to have recourse often to the fresh air upon deck, and sometimes to spirits of hartshorn, or to a glass of wine, for his immediate relief. He observed, that both the virulence and mortality of the scurvy were heightened by the uncultivated air of the place in which the sick, for several weeks, had been confined; yet, out of above a hundred patients sent to the hospital by this surgeon, not one was remarked to have any symptom of contagion generated in that apartment." This case is the stronger in point, because the men thus crowded together were in a diseased state. Many more facts of this kind might be mentioned, but these are deemed amply sufficient to satisfy the most sceptical that human effluvium is not productive of contagious fever.

Of a Specific Contagion as the Cause of Typhus. The contagiousness or noncontagiousness of typhus fever, has been the source of much, and occasionally bitter, controversy, between the members of the medical profession. Until the present century, few or none were found so bold as to question its infectious character, and thus run counter to the prejudices, not only of the profession, but of society at large. Though, however, the doctrine of contagion, as an attribute of typhus, remained for a long time unimpugned; yet it finally came to be doubted, and the noncontagionists can now number as their friends a large proportion of the distinguished members of the profession. One reason of our long continued and implicit credence in the contagiousness of typhus, may be found in the very character of man. It is his nature

to cling with great tenacity to long fostered and traditional opinions, clothed as they are with the names and authority of the venerable sages of other times; and he feels a pride in preserving his opinions, when once formed, unchanged; and thus it is that the prejudices of education, and the pride of consistency of opinion, often blind us to the light of truth, and rivet upon us the chains of error.

As it is a subject of much importance in many points of view, we will enter into the merits of this question as fully as the length of this essay will admit. The vexations, embarrassments, and restrictions upon commercial intercourse, produced by quarantine regulations, and the large and expensive establishments* in different countries for carrying them into operation, and the delay and inconvenience to individuals, all demand that this question should be rigidly examined into, and settled finally one way or the other. If, upon strict scrutiny, it should be found not to be contagious, then the abolition of quarantine establishments ought immediately to follow. If, however, after the most thorough and impartial examination, it should appear to be contagious, the quarantine regulations cannot be too rigidly enforced.

In discussing this subject, we shall in the first place contend that typhus fever has not the characteristics of a contagious disease; 2d, that it often has occurred without the presence of contagion; and 3d, that it often evinces no contagious character whatever. 1st. Typhus fever has not the characteristics of a contagious disease. All known contagious diseases run a regular and determinate course, and are marked by symptoms which unequivocally distinguish them from other diseases. Thus, smallpox, measles, chickenpox, and cowpox have each peculiar symptoms, which succeed each other in regular succession, and pursue an invariable and certain course, independently of the treatment used. Thus, smallpox, for instance, though it may have its symptoms ameliorated by a proper treatment, or the reverse may take place by improper management, will, nevertheless, pass through all its regular and determinate stages. The same may be said of the other examples adduced. Now, the question may be asked, does typhus fever come up to this rule? We answer in the negative. That it has no distinctly marked pathognomonic symptoms, is evident from the fact, that dif-

* Maclean, in his work on Epidemics, vol. 1, p. 456, says, "In this country (i. e. England) they have cost the nation for the last fifteen years, independently of the detention of ships, crews, passengers, and merchandize, at least £300,000."

ferent appellations are frequently given to the same fever by different physicians. Thus, one will pronounce it to be the common continued fever, another the genuine typhus, and a third, meeting with an unusually violent case, would call it yellow fever;* and there is not a single symptom laid down as belonging to typhus, which is not to be met with in other fevers.

Neither does it, like known contagious diseases, run a defined and determinate course. It may last one, two, three, or six weeks, according to the treatment pursued. Again, the period at which morbid action is developed after the reception of contagion, is determinate in contagious diseases. This is not the case in typhus fever, as contagionists say that the infection may lie dormant during a period extending from one day to six months.†

In the next place, acknowledged contagious diseases affect a person but once during his life; this is a wise and beneficent law stamped upon them by the great author of creation to prevent them from becoming universally prevalent. "It is the incapability of affecting the same person more than once which, in general contagious diseases, sets boundaries to infection; and could alone, where no precautions are taken, prevent communities from being extinguished."‡ Typhus fever does not possess this characteristic; it may, and frequently does, attack the same person repeatedly, and it is obvious that possessing, as it unquestionably does, this attribute, if you invest it also with the power of producing and propagating itself by a specified contagion, no human power

* Dr. Carrathers, surgeon of the Malta, in his account of the typhus which prevailed on board that vessel, and which is to be found in Trotter's "*Medicina Nautica*," remarks, that "many of the sick had yellowness of the skin, insomuch that he suspected that the yellow fever had been introduced by communication with a sickly ship from the West Indies!" See Cooke's Practice, vol. 1, p. 497.

† Bancroft says the fever may make its appearance six months after the infection, and Haygarth expresses the same opinion. We cannot help applying a remark of Dr. Armstrong's to the opinions of B. and H. on this subject. He says, "If an author is persuaded that there must be a specific contagion as the cause of every fever resembling typhus, he will undoubtedly go far to seek it." The above named gentlemen prove the truth of this remark, for they, with the most wonderful acuteness and sagacity, pretend to have detected its operation six months after exposure to it. Unlike the bed of Procrastes, which reduces every thing to the same common size, they endow contagion with the wonderful property of expanding or contracting, so as to embrace every case which may occur from one day to six months after its application. Does this diversity in the time of producing its effects, comport with our ideas of something specific and unchangeable in its nature? Do the known contagions ever operate in this way?

‡ Maclean on Epidemics, vol. 1, p. 100.

could prevent its spreading almost over the whole human family. Every person in health would be attacked, as often as he came within the infectious distance of any one laboring under the disease. Those only would escape who could preserve themselves constantly beyond that distance, or were laboring under some malady higher, in degree, than the prevailing epidemic. But, as disease spread, no person in health could continue long beyond the sphere of infection; and those who had been protected by diseases higher in degree, would, upon recovering, become liable to be affected by the contagion. It would observe a geometrical progression, diverging, as it were, from the centre to every point of the circumference of a city, a camp, an hospital, or a ship, while it had subjects to operate upon; i. e. while a single individual of the community remained alive it would never cease. Those who recovered would, again and again, be seized; no person who remained within the pale of society could escape. The malady would be communicated to the most distant nations. Infection would proceed in a continued circle, until the whole human race was extinguished."* This extract is a highly wrought, though true, account of what would be the effect of adding to the powers which typhus has of repeatedly attacking the same person, that of being capable of generating and propagating itself by contagion. Inasmuch, therefore, as typhus fever has no regular and pathognomonic symptoms, and as the period at which the symptoms of disease are manifested, after infection, varies, according to contagionists, from one day to six months, which is inconsistent with our ideas of something specific in its character, and uniform in its operation; and as it is unlike all known contagious diseases, in being capable of affecting the same person repeatedly, and does not spread until it becomes universal, which should be the inevitable effect of uniting to this latter trait the property of contagion, we think, therefore, it must be admitted that it does not possess the characteristics of a contagious disease.

2d. That it has often occurred without the presence of contagion. To prove this second proposition, we will adduce facts mentioned by contagionists themselves. It is presumed that as the advocates for contagion would not gratuitously and without good reason mention facts subversive of their own opinions, that, therefore, these facts ought to have more weight than would be attached to them under other circumstances; as a man is not to be suspected of insincerity or im-

* Maclean on Epidemics, vol. 1, p. 214-15.

proper bias when he gives evidence against himself. But to the testimony.

Trotter, who was a zealous advocate for the contagious origin of typhus, mentions, in his *Medicina Nautica*, many instances of it, which could not be traced to contagion. On board the *Niger*, he says, "It first appeared among the marines, but latterly affected the seamen. Its origin could not be exactly traced."* In the *Glory*, also, "We could not trace it distinctly to its source."† "No imported contagion was duly authenticated"‡ as the cause of the fever which broke out on board the *Edgar*, while at sea. Of that on board the *Pompey*, at sea, "No satisfactory account could be obtained of its origin."|| Trotter says, Mr. Johnson remarks in relation to the fever which occurred on board the *Saturn*, "I could not trace this fever to any infection imported by any of the people."§ In the *Magnificent*, the surgeon says, the fever spread more than he had expected; "but still I cannot trace it satisfactorily to a contagious cause."¶ Trotter says, when speaking of the typhus on board the *Captain*, "No imported contagion has been suspected here."** Of the same on board the *Uranic*, he says, "It does not appear that any imported contagion has been suspected as the cause of this fever."†† Speaking of the same vessel again, he says, "It does not appear that any imported contagion could be suspected here." In giving the result of his experience for many years, he says, "It is very certain that this fever is generally spread by contagion; but it is equally certain, that it frequently *arises in places where there could be no suspicion of communication with infected persons or clothing.*"‡‡ The above facts are taken from a treatise on pathology and therapeutics, by John E. Cooke, M. D., professor, of Transylvania University, in which this subject is discussed with the most masterly ability. I shall mention but one more case of this kind, to be found in Assalini's work on the Plague. He says, that in the years 1799 and 1800, "An epidemic disease spread its ravages in the hospitals of the army of Italy, and carried off daily its numerous victims." The fever spreading rapidly, and much alarm being created, "the public authority (says he) thought proper to consult the school of medicine of Montpellier, which hastened to calm their inquietude, and reanimate their drooping spirits, by proving that this fever, falsely regarded as pestilential, was not at all dif-

* *Medicina Nautica*, vol. 1, p. 153. † *Ibid*, p. 160. ‡ *Ibid*, vol. 3, p. 63.

|| *Ibid*, p. 64.

§ *Ibid*, p. 147.

¶ *Ibid*, p. 167.

** *Ibid*, p. 60.

†† *Ibid*, p. 151.

‡‡ *Ibid*, vol. 1, 252.

ferent from the fever of hospitals, the *typhus carcerum* of Pringle, or the fevers of camps and armies, *febris castrenis*." "With regard to this disease, the majority attributed it to rains and fogs. A citizen of the environs of Antibes assured me, that if this disease had taken place some months before, it would, without fail, have been attributed to the vessels just arrived from Egypt, and which had put ashore at Frejus without performing quarantine."* These facts are deemed sufficient to prove that typhus often appears without the least reason to suspect contagion as its cause.

Physicians, however, aware of this fact, and unwilling to surrender their long cherished opinions, are driven to the absurd alternative of supposing that typhus may have a double origin, or, in other words, that the specific contagion of typhus may be produced by other causes than itself. Thus, Gregory says, "there is nothing improbable in the supposition, that what originated in cold may be afterwards propagated by contagion."† Dr. Adams, in his work on morbid poisons, inculcates the same opinion. To these, and all similar opinions, we will apply the language of Bancroft when alluding to that of Dr. Adams on this subject. He says, "that Dr. Adams, who is accustomed and qualified to reason, should have believed any thing so unphilosophical and *incongruous*, would have been incomprehensible to me, if so many others had not discarded common sense on the subject of contagion. To represent a disease which is *notoriously contagious*, and propagated by contagion, as capable of being produced by other, and those very different, means, is to multiply causes unnecessarily, and, therefore, unjustifiably; and it moreover destroys the natural and just influence of causes upon their effects, by making the same disease result from very dissimilar causes; and, a little farther on, he observes, that "were it possible for typhus thus frequently and easily to originate without contagion, and at the same time acquire and multiply itself by a contagious quality, who could ever hope to escape the disease."‡

3d. That it often evinces no contagious character whatever. Contagionists themselves afford evidence to this effect. Trotter, in his *Medicina Nautica*, mentions many instances in which it was not contagious. "A fever (says he) of the typhus kind appeared among the gentlemen of the *Invincible*, in Torbay, which extended to a number of cases.

* Assalini on the Plague, p. 89, 90, 91.

† Gregory's Practice of Physic, vol. 1, p. 55.

‡ Bancroft on Fevers, p. 310, 311.

Yet it is singular, that it did not affect any of the seamen, although some of them attended their officer, who slept in the gun room, and where communication with the ship's company was not prevented.* "The Niger has been ten weeks at sea; at leaving port four relapses in fever happened among men discharged from the Warlar. Mr. Burd does not assign any cause for these returns; no infection spread from them."†

"We know of nothing (says Trotter) that can propagate this fever, but exhalations from the body. But a patient in typhus was sent from the Venerable to the hospital ship, with a factor about him, that exceeded every thing of the kind which ever came within my knowledge. After being washed and shifted, it still continued, and was perceived at a considerable distance. He died in a few days; yet nobody was infected from him, either in his own ship, or our hospital."‡

Speaking of the Charon hospital ship, Trotter says, "We had in that hospital many malignant cases of typhus, and some deaths, yet no infection was ever spread there."||

In 1790, a number of troops embarked on board the Gorgon to go to New South Wales. While lying in the harbor of Portsmouth, typhus fever prevailed among the soldiers, and several died. "The troops lived on the lower deck, and when the ports were shut at night, the exhalations from below naturally ascended through the gratings among the sailors; not one of them had the slightest sign of infection."§ The above facts are also derived from Cooke's work on pathology and therapeutics.

In the instance already cited from Assalini, of the fever which attacked the army of Italy, in the Ligurian republic, it is stated in a report made to the society of the school of medicine at Paris, that "it is was of the nature of jail fever, and was not at all contagious."¶

Wilson, in a note to page 156 of his chapter on continued fevers, says, "It is remarkable, indeed, that we sometimes meet with malignant fevers, which do not appear to be at all contagious." "Sometimes, (says he,) Dr. Lind observes, one man may be seized with the petechial or with yellow fever, while the rest continue unaffected." Dr. Lind gives several instances in support of this observation.

These facts prove that typhus fever is not, at least, always

* Trotter's *Medicina Nautica*, vol. 1, p. 109.

† *Ibid.*, p. 195.

|| *Ibid.*, p. 179.

‡ *Ibid.*, p. 164.

§ *Ibid.*, p. 210.

¶ Assalini on the Plague.

contagious, and it is inconsistent with our ideas of a strictly contagious disease, that it should at one time possess this characteristic, and at another be destitute of it. Known contagious diseases are always and invariably the same; they are contagious under all circumstances; but typhus fever has been shown not to be so; and, to use the language of Bancroft, "as the same disease, in suitable circumstances, is *always*, or *never*, contagious, we may safely rely" on the numerous facts adduced, to disprove the assertion, that contagion is one of the characteristics of typhus.

The advocates, however, for the contagious nature of typhus, in order to avoid the inference legitimately deducible from the above facts, and others which exist, are driven to the necessity of reducing the question of its contagious character to very narrow limits. They admit that it does not evince this quality in situations where there is a free circulation of pure atmosphere;* but contend that it possesses it in the impure atmosphere of close, filthy, and unventilated apartments. The fact of its attacking many persons in succession under such circumstances, has been assumed as sufficient ground for a belief in its contagious character; but this surely only proves the existence of some general cause acting on all in those circumstances, and not that the disease is communicated from one to the other by means of a specific contagion. That general cause is unquestionably the impure atmosphere itself; for, if an individual laboring under typhus is removed out of the foul air, he does not propagate the disease; but the impure atmosphere will continue to produce it in most of those subjected to its influence. The circumstances, then, under which alone contagionists say that typhus is infectious, being of themselves capable of producing it, or exciting it, are in them already predisposed; but it is unnecessary and unphilosophical to assign that as a cause of the fever, which is acknowledged to be only operative during the presence of causes which, without this, are capable of producing it. We do not think, therefore, that contagionists can sustain themselves on this ground. Under the next head of this essay we will speak more particularly of the cause of this impure atmosphere, which we consider as alone capable of producing this fever.

We have now finished what we have to say on this part

* It was from a knowledge and conviction of this fact, that infirmaries and houses of recovery were established in England. These institutions for the reception of the wretched paupers of that country, were the result of the philanthropic labors of Ferriar, Percival, and others; and will constitute a lasting monument to their memory and reputation.

of the subject. We trust that we have established to the satisfaction of every unprejudiced mind, the three positions for which we have contended. 1st, that typhus fever has not the characteristics of a contagious disease; 2d, that it has often occurred without the presence of contagion; and 3d, that it often evinces no contagious character whatever. If we have even proved the last of our positions, then Bancroft and his disciples at least ought to admit the justice of our conclusion that it is never contagious, as he uses the same train of arguments against the contagious nature of yellow fever, and comes to the same conclusion in regard to it, from the facts he had collected upon that subject.

There are, it is true, some apparently strong facts on record in proof of its infectious nature, but we believe that they cannot stand the test of rigid scrutiny. The fevers which occurred at the black assize, at Oxford, in 1577, and at the Old Bailey, in 1750, are always held up as evidences of its contagious character; but no one can read the remarks of Bancroft upon them, without being convinced of their utter want of claim to be considered in this light. To notice all the instances of this kind to be found in books, would swell this essay far beyond reasonable limits, and we shall therefore not attempt it.

We will now, in the last place, examine the opinion of those who deny that typhus fever possesses the property of contagion, and who consider it as a mere variety of the continued and remittent fever, and of course as arising from the same causes.

We are among those who entertain this opinion; and from a close and impartial examination of all the facts and arguments bearing on the question, are perfectly satisfied of its correctness. In order to render this subject as clear as possible, we will in the first place endeavor to show "that typhus fever arises in situations in which miasmata abound." 2d. "That the symptoms of typhus are those of autumnal or miasmatic fevers!" 3d. "That typhus fever appears in company with miasmatic diseases, and that they are mutually convertible into one another."* Before proceeding, however, to a consideration of the different heads of this part of the subject, it will be just and proper to remark, that we shall stand indebted to Dr. Cooke's admirable essay on the causes of typhus, contained in the first volume of his work on pathology and therapeutics, for most of the facts to be mentioned on this subject. The author of the above mentioned work

* Cooke's Pathology and Therapeutics, vol. 1, p. 450.

has so completely covered the whole ground of controversy, and so perfectly exhausted the subject, that but little else is left for others to do, than merely to draw upon the rich store-house of facts, collected by his unceasing and indefatigable industry.

1st. Typhus fever arises in situations where miasmata abound. Currie mentions, "that the corporation of Liverpool, being about to apply to parliament for powers to improve the streets and police of the town, requested the physicians of the Infirmary and Dispensary to suggest to them such alterations as might contribute to the health and comfort of the inhabitants.* The physicians took this request into serious consideration, and presented a report of considerable extent, including a view of *the causes* of the uncommon sickness of the two preceding years, and of *the measures requisite to prevent its recurrence*, and to remove the frequency of contagion in the habitations of the poor." The physicians consulted, and pointed out the necessity of enforcing cleanliness in the streets, to which end an improvement of the pavement was represented to be essential; and they particularly advised a general review of the common sewers, and an improvement of their structure, on the principles of the report on this particular subject, addressed by them to the mayor and magistrates, in 1788. They further advised, that effectual provision should be made for draining the grounds within the liberties, and particularly to the north of the town. "Repeated remonstrances (the words of the report) have been made for the last twenty years, on the collections of standing water, including filth of every kind, which are suffered to remain in the district which extends along the termination of the streets, from St. Paul's square to Byron street, and to which the low fevers, which in the autumnal months especially infect these streets, are principally to be imputed."† In this instance, the physicians, with a view to prevent the recurrence of the "low fevers" which had prevailed so widely during the two preceding years, recommend the removal of those circumstances, which are every where fruitful in the production of miasmatic exhalations.

At page 23, Currie mentions another fact, clearly evincing the miasmatic origin of typhus fever. He says—"The 30th regiment, as is usual with troops in Liverpool, was billeted in the town, but paraded and mounted guard in the fort, situated north of the town, on the banks of the river. The gene-

* Currie's Med. Reports, p. 246.

† Ibid, p. 247.

ral guard room had been used, previous to the arrival of the 30th, as a place of confinement for deserters: it was extremely close and dirty, and under it was a cellar, which in the winter had been full of water. This water was now half evaporated, and from the surface issued offensive exhalations." In a dark, narrow, and unventilated cell of the guard room, it was usual to confine such men as were sent to the guard for misbehavior; and about the 20th of May, 1792, several men had been shut up in this place on account of drunkenness, and suffered to remain there twenty-four hours, under the debility that succeeds intoxication. The typhus or jail fever made its appearance in two of these men about the first of June, and spread with great rapidity.* All the precautions used, by cleansing and ventilating the guard room, were ineffectual in preventing the progress of the fever. The weather was at this time wet, and extremely cold for the season: the men on guard could not be prevailed on to remain in the open air; and, from passing the night in the infected guard room, several of the privates of the successive reliefs caught the infection, and fell ill on the 10th, 11th, and 12th of the month.* We here find that all attempts at arresting the fever by washing and ventilation, were in vain; and why? because the source of the fever obviously was the "offensive exhalations" from the cellar under the guard room; and it was not until the guard room was shut up, and the soldiers removed to "a temporary shed erected in its stead," that the fever ceased.

Dr. Ferriar, of Manchester, in England, in his address to the police on the best means for the prevention of fevers, remarks, "that during the late epidemic, it was observed that the fever (i. e. typhus) prevailed most in streets which were not drained, or in which dunghills were suffered to accumulate, or where the blood and garbage from slaughter houses were allowed to stagnate." These facts, and many others of a similar import which we might mention, unquestionably prove that typhus fever arises on land, in situations where miasmata must abound.

It has also frequently appeared in ships at sea; and after a full and rigid examination of the many instances of the kind to be met with in books, we think we can venture to assert that in every instance, where the circumstances attending its origin and progress in such situations are detailed, they will be found abundantly sufficient to produce fever, without bringing in contagion to account for it. One

* Currie's Med. Reports, p. 25.

of two things will be generally found to exist; either that the state of the vessel as regards filth, &c. is such as would probably of itself give rise to febrific exhalation; or, that the crew has been exposed to miasmata on land, and being thus predisposed to fever, the exposure to bad weather, the inclemencies of a sea voyage, and the fatigue incident to such situations, act as existing causes, and fever is the result.

2d. That the symptoms of typhus are those of autumnal or miasmatic fevers. Under this head we shall say but little, because we believe that no one will question its truth, who examines into it with any degree of attention. Dr. Armstrong, in speaking of the identity of the remittent and typhus fevers, remarks, that the remittent and typhus fever from *malaria* or *marsh effluviium*, "has a combination of symptoms exactly similar to those which occur in continued typhus fever, and which, *as a combination*, occur in no two other affections whatever."* They both commence with a stage of oppression or weakened action of the heart; in both this first stage occasionally continues unchanged, and constitutes then the congestive fever; but in both the heart generally reacts from this first stage of oppression, and produces the open form of fever, the succeeding symptoms in each being dependent on the degree of this reaction, and the previous state of the different organs of the body.

The general symptoms in both are, therefore, alike, and if we descend to an examination of particular symptoms, we shall find none which exclusively belong to typhus. Petechiæ, which are so common in typhus, as to have given it a name, occur also in other fevers. Rush mentions their frequent appearance in the yellow fever of 1793, and almost every practitioner of any experience has often met with them in the autumnal fever of this country.

Yellowness of the skin is a frequent symptom of miasmatic fevers. It also often occurs in typhus fever. Mr. Caruthers, surgeon of the Malta, in his account of the typhus which had appeared in that vessel, says, that "many of the sick had yellowness of the skin, insomuch that he suspected that the yellow fever had been introduced by communication with a sickly ship from the West Indies."† In reference to the above statement, Trotter remarks that "Icterus is not an unfrequent symptom in typhus; it was particularly remarked among our seamen in the warm summer of 1794;"‡ and in vol. 1, p. 259, he says, "I have often seen the eyes and

* Medico-Chirurgical Review, September No., 1822, p. 395.

† Trotter's *Medicina Nautica*, vol. 3, p. 215.

‡ *Ibid.*, p. 213.

skin, with the urine, as deeply tinged with bile in typhus, as I have remarked them in the yellow fever of the West Indies.”

We will now proceed to the consideration of the third and last division of this part of our subject, which is, “That typhus fever appears in company with miasmatic diseases, and that they are mutually convertible into each other.” To prove this we shall resort to the testimony of those who were perfectly familiar with the disease in all its different forms.

It is now generally acknowledged that dysentery is but a form of our autumnal bilious fever, and, of course, that it originates from the same cause, or, in other words, that it is, what the unnerring sagacity of Sydenham long since pronounced it, a “*febris introversa*.” Typhus fever, then, often appears in company with this disease. Pringle, in his account of the diseases of the army when in Germany, in the year 1743, says, “The state of those at Feckenheim has been already mentioned; there the hospital fever and dysentery grew daily worse.”*

Trotter says, the ship Reasonable arrived at Spithead in January, 1794, and “landed upwards of a hundred very ill of typhus and dysentery.” “A considerable number of cases of flux and (typhus) fever, were received from the Gibraltar.”†

At page 192, of vol. 1, of his *Medicina Nautica*, Trotter says, “There were a larger number of bad cases of typhus, ague, and dysentery, than usually come to a naval hospital at one time. From the same transport, and in the same regiment, were brought people of the three diseases just mentioned;” and in vol. 2, p. 14, he says, on board the Powerful, “a dysentery was associated with the fever.”

It also appears in company with remittent and intermittent fevers, which are confessed by all to be produced by miasmatic exhalation, and is often converted into them, and *vice versa*.

There is an abundance of evidence in proof of this. Trotter says, “I have seen a family where the father was laboring under an obstinate tertian, while the mother and some of the children were ill in bed with typhus.” “Nay, I have constantly remarked in those ships where contagion prevailed, that many cases of regular intermittents and remittents occasionally appeared. When they increased in proportion to the number of the continued type, and the latter becoming milder in its attack, I consider it as an infallible sign that the

* Pringle on Diseases, p. 25. † Trotter's *Med. Nautica*, vol. 1, p. 58.

power of the infection was on the decline, and would be speedily subdued.”*

“The attacks of fever,” says Trotter, “since leaving Cork, had been more numerous than on the preceding week. They were both of the continued and intermitting types.”†

About the beginning of March, the infection seemed to be on the decline; which appeared from the attacks being less severe; some cases of the remittent and intermitting type were now observed.‡

“The sick list consisted of seventeen venereal patients, and seven in fever, some of them regular tertians. Some were every morning discharged to duty, and others added in the course of the day, in both the continued and intermitting forms.”||

“Those cases (of typhus) which have occurred latterly, have been slight, with a general intermitting tendency.”§

“The Royal George did not seem to suffer much from the infection.” “They assumed a bilious remittent form.”¶

Trotter says, “It is not easy to trace those circumstances, which occasionally convert an intermitting or remittent fever into a continued type, (or typhus,) and *vice versa*. There must, however, be something in their disposition very much alike; for, wherever we find the typhus affecting a number of people at a time, we also find cases of the remittent and intermitting form.”**

Ferriar mentions one instance of the conversion of typhus into intermitting fever. “In one case,” says he, “where a typhus was unusually protracted, after several hazardous determinations to the stomach and bowels, the fever assumed the form of an intermitting.”††

Trotter, in speaking of the typhus on board the Valiant, says, “the cases were becoming milder; in some it put on the intermitting form, which showed that it was now on the decline.”‡‡

Dr. Armstrong, in a short essay on the origin, nature, and prevention of typhus fever, published in 1822, made a public recantation of the opinion he had long entertained relative to the contagion of typhus, and adopted that of its miasmatic origin, and its identity with intermitting and remittent fevers. The following account of the reasons of his change of opinion, is taken from the Medico-Chirurgical Review, September number, 1822. “Dr. Armstrong states, (says the Re-

* Trotter's Med. Naut. vol.1, p. 185. † Ibid, p. 311. ‡ Ibid, p. 187.

|| Ibid, p. 188. § Ibid, p. 70. ¶ Ibid, p. 83. ** Ibid, p. 311.

‡‡ Ferriar's Med. Histories, p. 82. †† Trotter's Med. Naut., vol.1, p. 66.

view,) that in 1819 he attended a patient laboring under an intermittent fever, which, in its progress, put on a remittent character, and ultimately a continued form and typhoid type, accompanied by very malignant symptoms. This case made a deep impression on his mind, and inclined him to ask, whether intermittent, remittent, and typhus fevers, might not possibly be modifications of one and the same disease. Up to this period, Dr. A. had firmly believed that human contagion was the sole cause of genuine typhus fever; but a doubt having been excited, he determined, if possible, to divest his mind of all former bias, and investigate the subject ab origine. In the course of the three succeeding years, a very great number of typhus cases have fallen under his notice, and the result of his observations is a decided conviction," "that what the Italians vaguely call *malaria*, and the English, as vaguely, *marsh effluviu*m, is the primary source of typhus fever." In the next page the Review continues the subject, and says, "In tracing back many of the cases, Dr. A. found that they had commenced as intermittents; he has seen the remittent run into the continued typhus, and the continued typhus become remittent or intermittent."*

What stronger testimony can any one require to prove the identity of any two diseases, than the fact of their frequent conversion into each other? We have cited abundance of evidence to prove that this frequently takes place in typhus and acknowledged miasmatic diseases, and it is a fact, too, which cannot be evaded, unless by those who are absurd enough to contend, that a disease which they say is one *sui generis* and specific in its character, can change to one entirely different in its nature and origin. If there be any such persons, we will only ask them, if smallpox was ever known to change into measles, or *vice versa*, or cowpox into chickenpox?

It has been the common opinion for a long time, that typhus fever is a disease exclusively of the winter season, and hence the conclusion that it cannot arise from marsh effluviu

* This repudiation of a long cherished and favorite opinion is highly honorable to Dr. Armstrong; it shows a mind truly independent and devoted to truth, and clearly proves that he will not cling to an error, when convinced of its being such, merely for the sake of consistency of opinion. *Oc si sic omnes*. It, moreover, speaks volumes against the contagious nature of typhus. Dr. Armstrong never would have left the ranks where he had long fought as the most distinguished champion, without the most strong and irresistible reasons for his conversion.

reference to the different works on the subject will support us in the denial. Currie and Trotter mention many instances of its appearance and most extensive prevalence during the hot weather of summer and autumn, and Armstrong says he has known it to prevail during the greatest heats of summer. 'Tis true, that it prevails almost every winter, more or less, among the poor population of almost all the large cities both in England and this country; but, upon enquiry, it will be found, that those attacked have most generally been exposed to the sources of miasmatic exhalation during the preceding summer or autumn, and having thus acquired a predisposition to disease, the complicated and depressing miseries of poverty and want act as powerful exciting causes, and fever is produced.

We have now finished the subject of these pages; we cannot, however, say to our own satisfaction. We are conscious that much has been left unsaid, the ordinary limits of an essay not admitting of any thing like a wide range of discussion. We have endeavored to cull from the various works on the subject, the most striking and prominent facts bearing on the different subjects embraced in this essay. A considerable portion of it has been devoted to an examination of the different assumed causes of typhus, because we consider the possession of correct notions on this subject a matter of very great importance. Whether the conclusions we have arrived at are correct or not, must be left to the decision of others.

ART. II. *Case of Diseased Sciatic Nerve removed by Excision.* By ROBERT BAYARD, M. D., &c., of St. John's, N. B. Communicated by THOMAS COCK, M. D.

MRS. HICKSON, æt. 40, had been complaining for several years of a pain along the back part of the left thigh, which was soon followed by the appearance of a tumor about three inches below the tuber ischii. In the early stage of the complaint she experienced but little apparent inconvenience from it, as it was accompanied with no increase of pain. She lived in the country, a few miles distant from the town, and frequently walked to and from it, complaining principally of fatigue affecting her more readily than previously to the occurrence of the disease. The tumor gradually increased in size, and, after a continuance of three years, it acquired a size equal to, or larger than, the egg of a goose. For two

years past it made rapid encroachments upon her health, producing great pain in the lumbar and sacral regions and in the whole course of the leg, accompanied with great emaciation, loss of appetite, colliquative perspirations, and restlessness. Her health was so much reduced that, for several months prior to the operation, she was confined to her bed. I was consulted, and saw her for the first time on the — May last, when, upon examination, I was satisfied that the tumor was either an expansion of the nerve itself, or that it intimately involved its pressure upon the tumor, which was in no way discolored, created great pain and numbness from the hip to the toes. The general health of the woman was daily suffering from the disease; I, therefore, adopted immediate excision as the only chance of relief; nor did I hold out much encouragement to the friends, as I apprehended that the diseased action of the nerve might possibly have been continued within the pelvis. I called in the able assistance of Mr. Bell, a surgeon in the 81st regiment. He coincided in opinion with me, that excision, though by no means flattering, was the only chance for my patient. She readily consented to the operation. An incision was accordingly made on the tumor, which was readily exposed, owing to the extreme tenuity of the limb; after the bulk of the tumor was laid bare, and the nerve was exposed as it apparently entered into, and issued out of, the swelling, the nerve itself was found to be very much thickened and enlarged; it was, therefore, traced upwards as high as the tuber ischii and divided, and downward an inch below its popliteal ramification, and these removed. During the operation, the patient lost but little blood—much less than was anticipated. Syncope supervened the division of the nerve; and a state of collapse continued for an hour; after which she gradually revived, and complained of no uneasiness, and of less pain than she had suffered for months past. The wound being dressed, she was placed in bed, under appearances which promised favorably for three or four days, as there was no discharge from the sore, and no return of pain during this period; but towards the end of the fourth and fifth days, the pain in the back, in the region of the lumbar and sacral nerves, became urgent; with great thirst, dry tongue, restlessness, and vomiting, and with a feeble and decreasing pulse. The vital energies gradually sunk, and the woman expired on the sixth day after the operation, apparently from extreme exhaustion. I was unable to determine whether death was the consequence of general debility, increased by the operation, independent of any peculiar effect from the division of so large a nerve, or

whether the disease was continued into the pelvis, as I was prevented from examining the body after death. I was inclined to attribute death to a continuation of the disease along the nerves within the pelvis, aggravated by the division of a diseased portion of it. The diseased portion was immediately immersed in camphorated spirits, which has reduced the size of the tumor, and the upper and inferior portions of the nerve itself. The morbid appearances will speak for themselves. The tumor, although not actually an expansion of the nerve, appears intimately connected with it, and incapable of any separation, without leaving a diseased portion of the nerve; the adventitious and original structures incorporating with each other.

ART. III. *Cases of Disease produced by the Poison of Putrid Animal Matter, with Remarks.* By PHILIP E. MILLEDOLER, M. D., of New York.

ALTHOUGH much has already been done by pathologists in elucidating the subject of animal poisons, yet it must be confessed that it still presents an extensive field for investigation. And, perhaps, no branch of it is entitled to more consideration than that which relates to the absorption of putrid animal matter, and the constitutional irritations thereby produced. This will be readily admitted, when we reflect how many useful lives have already been sacrificed, and are constantly exposed to the deleterious influence of this destructive agent, and also remember that our knowledge of the subject is limited, and, of course, our theories in some measure uncertain and conjectural.

There remain still to be investigated the qualities of this poison—to be explained, how far the varieties of symptoms observable in different cases are to be attributed to an essential difference in the virus absorbed; how far the degree of intensity may operate; what influence certain habits and idiosyncrasies may exert in the production of such modifications; and by what marks these obscure peculiarities of constitution are characterized and may be known.

How different in different individuals, and even in the same person at different times, have been the effect of injuries received in dissection, under circumstances as nearly alike as our ideas of similarity extend!* Observing at one

* This the author can vouch for. It has occurred to himself.

time an entire exemption from disease, either local or constitutional, when, by means of punctures, incisions, or abrasions, the greatest facilities have been presented for an absorption of poison, from subjects that have died of various diseases, and in every stage of decomposition; while on other occasions, the most violent effects have followed the slightest exposure, and when the least opportunity has been offered for their production. These and other considerations enforce the propriety of a strict enquiry into this subject, and the necessity of a close investigation of facts, upon which alone must be founded all that is correct in theory and useful in practice.

The following cases, differing more or less from any others with which we are acquainted, are submitted simply with a desire that the publication of them as additions to the large assemblage of facts already in our possession may be found useful and interesting to the profession, and advantageous to the community.

CASE I.—On the evening of July 20th, 1829, I was requested to visit Miss P., a young lady about twenty-two years of age, of a sanguine temperament, very florid complexion, and plethoric habit. She is habitually costive. The menstrual discharges are profuse, protracted, and accompanied with some pain.

On Saturday, the 18th, the father of the patient died of a lingering consumption, accompanied, toward its close, with extensive disease of the intestinal canal, producing diarrhœa and bloody mucous discharges, alternating with a copious expectoration of a depraved purulent matter from the lungs. The daughter, as is common on such occasions, was observed to kiss the corpse, having at the time a sore lip deprived of its cuticle.* On Sunday, the 19th, the lip became inflamed and painful, and commenced swelling. On the evening of the 20th, the swelling extended from the right corner of the mouth, involving one half of the upper lip. It was hard, painful, of a deep red color, and had on its most prominent part a small festered surface.

The pulse was frequent and hard, skin dry and heated, and bowels costive. She has had no sleep for the last two nights. The case seemed one in which a phlegmonous inflammation, acting upon a plethoric and irritable subject, had produced a more than ordinary derangement of system. With this view there were applied leeches to the tumor.

* This fact was mentioned to me on the morning of the 22d, by the patient's brother.

The hemorrhage from the bites was encouraged by warm fomentations. A lotion of warm lead water and laudanum was prescribed as a local application, and the following anodyne administered:

℞ Pulv. Dover. grs. xii.
 Antimon. v.
 M.

A dose of sulphate of magnesia was directed to be taken early in the morning. The diet to consist of barley water or gruel.

July 21st. The patient is no better. She had slept during the night, and the skin had been somewhat moist. The cathartic has been taken, but has not yet operated. Complains of pain in the right side of the chest, which is accompanied with cough, and appears to be situated externally. This symptom continued throughout, and, as the disease progressed, became very severe.

The following was prescribed:

℞ Aq. acetat. ammoniæ,
 Aq. Fontan. aa, ℥iv.
 Antimon. tart. grs. ii.

End. quaq. 2d hora.

M. Coch. mag. sum.

2 P. M. The salts have operated freely. There appears to be a slight remission. Continue recipe.

In the evening the symptoms are more severe. The fever is increased. Tongue covered with a whitish fur; headache violent; pulse frequent and tense. The tumor is enlarged, of a dark, liver red color, showing no tendency to suppuration; erythema extending around it.

The patient was bled to xvi. oz., which relieved the pains, produced moisture of the skin, softened the pulse, and lessened its action.

Continue recipe. Apply yeast to the part, and a poultice inside the lip.

22d, 7 A. M. Informed that the patient had slept during the early part of the night, and appeared more comfortable. Towards morning all the symptoms have returned with aggravation. The inflammation and swelling now involve the whole of the upper lip, extend upon the right cheek, and downwards upon the lower lip, and towards the base of the jaw.

The venesection was repeated to about xviii. oz., producing at the time a sensible alleviation of all the symptoms. A Seidlitz powder was directed to be taken immediately. The recipe was continued, and the same local applications.

At 9 A. M., I was under the necessity of fulfilling a pro-

fessional engagement in the country, made previous to my being called to visit Miss P. My intelligent and experienced friend, Dr. Gilbert Smith, being apprized of the circumstances of the case, was requested to attend the patient during my absence, to which he kindly consented. Dr. S. was sent for by the family at 2 P. M. At this time the symptoms appeared so severe, and the case so unusual and alarming, that it was deemed expedient to hold a consultation, and Dr. J. C. Cheeseman was called in. These gentlemen saw the patient about 3 P. M. The Seidlitz powder prescribed in the morning having operated freely, an anodyne of solution of sulphate of morphia xxv. gtt. ,* with \ss of spts. mindereri, &c. was administered. Yeast was continued to the lip, and diluted alcohol as a lotion to the adjacent parts.

The recipe was continued. In the evening sixteen leeches were applied to the throat, which was stiff and painful; mustard cataplasm to the side.

The blood taken on the 21st and 22d, particularly the last, was much cupped; the coagulum thickly covered with a buffy coat.

23d. The patient is no better; all the febrile symptoms have returned. A dose of submur. hydrarg. was prescribed. Early in the afternoon the warm bath was used, but seemed to aggravate the symptoms; after the bath the anodyne was repeated.

Half past 7 P. M. I visited the patient, and found Drs. Smith and Cheeseman in consultation. These gentlemen attended the case with me twice a day until its termination. Since the exhibition of the anodyne the surface has become somewhat moist; the pulse is frequent and strong, 120 in a minute. It was concluded to administer a Seidlitz powder every second hour until evacuations were produced; after which, to give $\text{gtt. v. sol. of morph. with \ss. spts. mind. \&c.}$ every second hour.

24th. The symptoms are rather more mild. The medicine operated early in the evening; after which she had slept at intervals. There is a slight discharge of healthy looking matter from a number of superficial points on the lip, giving it a cribriform appearance. The tongue is clean at the edges; the centre covered with a brownish fur.

Continue sol. sulph. morph. gtt. v. \&c. , every second hour. Apply yeast poultice to the neck; yeast to face and lip; barley water acidulated, and yeast and water, as drinks.

7 P. M. Not so well as in the morning. Complains of

* Equal to sixty or seventy drops of opium.

strangury, for which, spts. nit. dulc. was given. An injection was ordered, to be followed by a Seidlitz powder, if the first does not produce free evacuations; after which, repeat the anodyne of gtt. xxv., &c. Use spts. mind. as a wash.

25th. Symptoms as on the morning of the 24th. There is no abatement of the tumor; its margin is not well defined; has a doughy feel, and is of a mottled red and purplish hue. The erythema is extending upon the forehead and over the scalp—very painful to the touch. Continue sol. sulph. morph. gtt. v., &c.

In the evening the symptoms of excitement have again come on with severity. A Seidlitz powder was prescribed, to be followed by the anodyne.

26th. The bowels have been freely acted upon by the Seidlitz powder. Purgatives, however, appear to afford no permanent relief. The inflammation continues to spread; the left cheek has become suddenly swollen. Continue sol. sulph. morph. gtt. v., &c.

Apply spts. mind. and ether, as a lotion to the face. In the evening the symptoms are much aggravated; head very much affected; pulse very frequent and tense, between 130 and 140 in a minute. The right eye is now completely closed, from the swelling of the lid. Twelve leeches were applied behind the ears, and a blister to the back of the neck. The following was prescribed:

℞ Magnes. ust. grs. x.
Pulv. rhei. grs. xv.
M.

27th. The effect produced by the leeches, &c. was but temporary. In addition to the other symptoms, the patient complains of a burning pain in the lower part of the chest and epigastric region.

A large blister was applied to the parts affected. Habeto pulv. antimon. grs. v. quaq. second hora.

At 2 P. M. this was discontinued, as it produced sickness and retching.

6 P. M. No change for the better; the head is very much affected; pulse frequent and tense; other symptoms as on the 26th. It was decided to abstract blood from the arm until an impression was made upon the pulse. This was done, and about xiv. oz. taken, when she expressed herself as being more comfortable. The skin is moist; pulse softer, and somewhat reduced in frequency. Repeat sol. sulph. morph. gtt. xxv.

28th. The blood taken last evening is very much cup-

ped; the coagulum contracted to a very small size, and showing the buffy coat.

8 A. M. The skin is moist and rather cool. The swelling is of a paler color; the pulse is frequent, small, and compressible. Habeto sol. sulph. morph. gtt. v. every second hour, in arrow root or barley water.

2 P. M. Pulse still frequent and small; skin is unpleasantly cool and moist. Give warm wine whey; sol. sulph. morph. gtt. x. every second hour.

4 P. M. Patient is evidently sinking; respiration hurried and obstructed; pulse feeble, threadlike, and very rapid; extremities cold. Warm spirituous fomentations and bottles filled with hot water were applied to the feet. Warm stimulants were given, but failed to produce reaction. The patient continued in this state until 6 P. M., when she expired. The body was not examined.

From a review of the above case, it is evident that the local disease was of a peculiar character. It had neither the unmixed characteristics of simple phlegmonous inflammation, nor of erysipelas, but seemed a combination of both. The appearance about the lip simulated at one time a carbuncle, though differing in many respects from the usual symptoms of that disease.

The pulse and appearance of the blood proved the constitutional affection to be of a highly inflammatory character.* The symptoms, at times, seemed to be retarded by the remedies employed.

Is it not reasonable to suppose that, independent of the local affection, there had been absorbed into the system a poison from the dead body, with which the lips of the patient came in contact, and which was the cause of the obstinacy and malignancy of the symptoms? The mouth of the deceased father was filled with aphthous ulcers, and the stumps of decayed teeth. It is a common thing for a quantity of frothy mucus to ooze from the mouth after death, which may have inoculated the lip of the patient; or, if this was not the case, the moisture on any part of the surface of a corpse as illconditioned as this was, coming in contact with a raw surface would, perhaps, be sufficient to produce the effect. This is more likely to be concluded, when, from the preceding history, we find that although at times there appeared to be a remission, evidently produced by the treatment, which, un-

* This condition, *Davy* thinks, does not prove inflammatory action always, as he has shown in his experiments on the blood.

der ordinary circumstances, would have been sufficient to check the disease, yet, in this case, there appeared to exist an irritation which soon renewed the violence of the symptoms only to be mitigated by the measures resorted to.

Towards the close of the disease under these circumstances, only one of two plans could have been adopted: either to remain as *expectants* hoping that the *materies morbi* might wear itself out, or be vented in abscess upon some part not of vital importance, in the mean time aiding nature in resisting the effects of the irritation by appropriate remedies; or else to pursue the plan adopted, and by a more active treatment, justified by the symptoms and the effects produced by the means previously employed, to ward off the determination to vital organs, particularly the brain, which was much affected throughout the disease. The latter alternative was chosen, judging it preferable to risk the debility to be expected from the abstraction of blood from the general circulation, rather than the irremediable effects that might be produced if the disease should be suffered to go on unchecked.

I will proceed to relate some facts that came under my observation while resident surgeon of the New York Hospital, and which have some bearing on this subject. Reference is had to two instances in which poison was introduced into the system in rather an unusual manner.

CASE II.—The one was the case of a patient of the hospital, a middle aged man, of sanguine temperament, ordinary stature, a stevedore by occupation. He had been engaged in unloading a vessel, of horns, when he was scratched on the thumb by the ragged extremity of one of the horns, to which was attached a quantity of animal matter in a state of decomposition. The wound, which was very slight, became inflamed, and festered. The inflammation was propagated in the course of the absorbents to the bend of the elbow and the axilla, and continued to extend and spread until the entire limb was involved. The accompanying fever was of a typhoid character, and was treated by gentle cathartics, such as *mist. eccoproct.*, and anodyne diaphoretics. After suppuration was established, he was put upon the use of demarcotized opium, mineral acids, and other tonics. The glands suppurred and were opened, as also several abscesses on the arm and forearm, from which a quantity of illconditioned matter, mixed with shreds of membrane, was evacuated. Yeast poultices were used as local applications. Even after the more immediate effects of the disease passed off, the patient was subject to abscesses forming on different parts of

the body, which were successively opened. After continuing in the house for some months, he was discharged, his constitution being much impaired, and so shattered as never to have recovered its wonted energy. Previous to the accident he had been a vigorous man. Some time after his dismissal, he returned to the hospital, where, I have been told, he has since died of a pulmonary complaint.

The facts alluded to in the other case happened in my own person, and are the following :

CASE III.—On the —, a patient died in one of the venereal wards of the New York Hospital. An erysipelatous inflammation had commenced in the groins, where he had open buboes, in a healing condition, and extended over the abdomen and down upon the thighs. The patient died of peritoneal inflammation. In examining the body after death, a large quantity of puriform matter was found effused in the abdominal cavity. My hands were exposed to this matter, which was very offensive and acrid, in examining the intestines. It was late in the afternoon when the examination took place. On the following morning I felt slightly indisposed, and took a dose of salts, which operated during the day without affording relief. On the contrary, the symptoms increased in severity. A headache, which in the morning was trifling, became much aggravated; the skin was dry and contracted. Throughout the day there was experienced a sensation of heat, not permanent, but alternating with unpleasant chilly feelings. There existed much precordial anxiety and great depression of spirits. Early in the evening my attention was directed to a sense of pain felt in the bend of the elbow and in the axilla; and upon inspection, the glands were found swollen and tender to the touch; red lines were seen stretching from the lower and posterior part of the forearm towards the bend of the elbow, and upon looking at the back of the hand, a small pustule was observed, with an areola of inflammation extending around it.* I was now satisfied that morbid matter had been absorbed, and was producing its baneful effects upon the system. As the hours elapsed, the severity of the symptoms increased; the headache became very violent; much pain was felt in the back and thighs; the condition of the pulse I do not remember; the tongue was covered with a whitish fur; the eyes were intolerant of light. Having bathed my feet in

* I do not believe that there was any scratch on the hand, but that the surface was entire.

warm water, and taken a draught of warm balm tea, I retired to bed. Soon after, the chilly sensations were no longer experienced, but the body became uniformly hot.

About 8 P. M., a medical friend coming in, he was requested to bleed me. After having abstracted a moderate quantity of blood, he was about to desist; I, however, interfered, requesting that the blood might be permitted to flow. This was done, having no definite object in view, excepting that the effect was pleasant at the time; about thirty ounces were taken; while the blood was flowing, and for some time after, the pains were relieved. No sensible perspiration had as yet been effected; with a view to produce it, and relieve my anxiety, which was great, (the headache, &c. beginning to return,) I took an anodyne of tinct. opii. gtt. lx., and ζ ss. spts. mindererus. The draught of warm tea was repeated; soon after, as light moisture was perceived on the palms of the hands, which became general over the whole surface and very profuse.

The relief afforded by this, in connexion with the soporific effect of the anodyne, soon produced sleep, which was undisturbed. In the morning all the violent symptoms had disappeared. Took some mild cathartics, and in a few days felt as well as usual, independent of light debility. The glands remained swollen for some time, but gradually subsided. The pustule on the back of the hand became an ulcer of about the circumference of a pea. It assumed the form of a *hunterian* chancre. In fact, it was the most complete specimen that I ever saw; nothing was applied to it but a piece of soap plaster, and it remained for a fortnight. Fearing lest there might be something specific in its character, I used, for a length of time, a concentrated syrup of the woods, and diluted nitric acid; at the end of the time mentioned, it healed, leaving nothing but a cicatrix, which still remains.

With respect to the treatment of the above case, I am inclined to lay much stress upon the anodyne that was taken after the bleeding. Had the *pain* been permitted to return with violence, being in itself a great source of irritation, especially in a nervous, melancholic temperament, depriving of sleep, and affording an opportunity to the mind to act upon the body, there is but little doubt that the morning would have found me suffering under an aggravation of all the symptoms; the disease would have been more fully established, and its effects more severe, the system, perhaps, being less capable of resisting the irritation, after the exhaustion produced by the large depletion.

Concerning the ulcer on the hand, my present opinion is

that it was merely an irritable sore. The subject from which the poison was contracted, had undergone a full mercurial and alterative course, and at the time the erysipelalous inflammation supervened, there were present none of the characteristics of venereal. From this and other considerations, we have been led to conclude that there do exist other irritations capable of producing the same appearances, that have been considered the peculiar effect of a specific syphilitic virus.

Whatever other conclusions may be drawn from the above case, it teaches practically the maxim of Aristotle, “*ἄρχη ἡμισυ παντός*,” which may be applied to the treatment of many diseases with great advantage.

ART. IV. *On the Use of Ergot; with Cases.* By S. W. AVERY, M. D., of New York.

ALTHOUGH not one of those who think that ergot can be commonly used to expedite natural labor without risk, I believe no one who has given it a fair trial can doubt its capability of being occasionally employed to excite uterine contraction with very great advantage. The following cases will show the manner in which I have used it, and, with the exception of the first, with apparent good effect:

February 1st, 1825, I visited Mrs. W., æt. 19, of a full habit and robust constitution, in her first labor. The head presented naturally, and she had no unfavorable symptoms; twelve hours from the commencement the os uteri was nearly dilated, and the external parts in a yielding state, but the pains were short and lingering, and she had become fretful and impatient. I mixed ℥j. of ergot with a little tea, and gave her one third of it; in about fifteen minutes she had a hard pain which lasted longer than the others, but did not occasion much alteration in the situation of the child. She then remained quiet some time, when I gave the rest of the dose, which was soon followed by pain. Upon examination, the uterus proved to be strongly contracted upon its contents. The pulse became full and rapid; the face was first flushed and at last of a purple hue; the extremities were rigidly extended, and the efforts to bear down were so violent as to more resemble a general spasm than labor pains, and she appeared nearly in a state of insensibility. As may be supposed, I began to be alarmed for her safety, but in about twenty-five minutes the child was born, in a state requiring

some exertions to establish respiration, and the mother gradually recovered her sensibility, and was up in a few days.

This is almost the only case among several hundred natural labors which I have attended, in which I have given ergot to hasten the delivery of the child—not feeling justified in interfering where there was a prospect of a favorable issue by exercising a little patience; and where the head has been locked in the pelvis I have given the preference to the vectis or forceps. I do not hesitate to say that nature left to herself undoubtedly would have accomplished her own work in a reasonable time in this instance, and that the ergot was worse than useless; for had the resistance to the passage of the child been materially greater, I am inclined to think it would have been born dead.

In No. 18 of Johnson's Medico-Chirurgical Review for 1828, page 358, is a short analysis of a work published by Mr. Mitchell on difficult cases of parturition and the use of ergot of rye, in which it is spoken of as an article calculated to entirely supersede the necessity of the forceps and vectis; "a safe and efficacious medicine in accouchery cases," calculated to "remove all danger attendant on the woman, quickening and facilitating the delivery," and that invariably "the women recover much better after it than they had done before," &c. &c.

Far from calling in question the correctness of these remarks of Mr. M., who, I have no doubt, wishes to promote the best interests of the profession, I shall merely say they seem to me calculated to encourage the inexperienced accoucheur, for the sake of the éclat of always making a *short job*, to too general use of a very powerful medicine, and to interfere in a process which nature is fully competent to conduct in the great majority of cases. That the ergot given at an early period of the labor, before the os uteri is dilated, or when there exists any considerable obstacle to speedy delivery, may exercise a deleterious influence upon the fœtus, I have no doubt; and this I believe to be the opinion of far the greater number of respectable practitioners in this country. My worthy friend, Dr. Willoughby, professor of midwifery in the College of Physicians and Surgeons of the Western District, whose talents and very great experience entitle his opinions to the highest respect, told me a few years since that he was fully convinced of the noxious effects of this medicine when given too early; and I have heard of several accoucheurs who made great use of it, being accused by the old women of giving something that killed the children. How it does this I shall not attempt fully to explain:

but it appears to me not improbable by interrupting that process which is going on in the placenta, necessary to the fetal existence. The change elaborated upon the blood in the fetal portion of the placenta undoubtedly depends upon the free circulation of the fluids of the mother in the maternal part. This is probably in a great measure interrupted during the contractions of the uterus in parturition, but for so short a time as to have little or no effect upon the fetus; while in that contraction occasioned by ergot, which more resembles the rigid state of the muscles in tetanus than the natural parturient throes, and which I think I am warranted in saying often lasts five or six times their usual length, it seems not impossible that the function of the placenta may be interrupted for so long a period as completely to stop the circulation of the child, particularly when the os uteri is not dilated, or any obstruction is opposed to immediate delivery.

August 7th, 1825, visited Mrs. H., of a relaxed, plethoric habit. Had just been delivered of a full grown healthy child by the natural efforts. In attempting to take away the after-birth, the funis, which was much smaller than usual, had been broken at the placental extremity, and she had had no pains since the birth of the child. The uterus was flaccid, and the hemorrhage from it such as to be very alarming. Strict rest was enjoined; gentle pressure was made upon the abdomen with a cloth dipped in cold water, and a full dose of ergot immediately given. In a few minutes she complained of pain; the uterus was felt contracting, and the placenta and a quantity of coagular were soon discharged, with an entire cessation of the flooding. At the end of thirty minutes more she still had some uneasiness in the back, and the uterus was felt like a hard ball above the pubis. She was up in a few days.

September 20th, 1826, Mrs. T., æt. 30, of a meagre and rather melancholic temperament, in her first labor. The pains irregular, and the parts dry and unyielding. The pulse being hard, I drew sixteen ounces of blood from the arm, and administered pulv. ip. et opii. gr. x., which procured several hours repose. On awaking, the pains came on regularly with long intervals, and in six hours the breech of a full grown child presented; as the hips descended, the pains were as efficient as usual, but the intervals increased so much in length that she often dozed or slept quietly for several minutes. I began to be apprehensive lest when the shoulders and head were passing the pelvis the child would suffer from compression of the cord, and as the pain subsided which brought the hips without the external parts, I gave

her a full dose of ergot in a little tea. The pain returned sooner than before, and did not cease till the child was born, which was healthy. I attended to the afterbirth as soon as possible, which I believe to be advisable when the ergot is used, and on passing two fingers along the cord found the lower edge of the placenta presenting in the vagina, and the upper portion firmly embraced by an irregular contraction of the anterior part of the uterus directly above the pubis. As there were no urgent symptoms and she complained of a good deal of pain, I did not introduce the hand to dilate the contraction, but gave her an opiate, and after some time removed the afterbirth without much difficulty. She soon recovered.

October 24th, 1827, in the morning, I visited Mrs. K., of a sanguineous temperament; has suffered from leucorrhœa and menorrhagia; mother of eight children; told me she had nearly lost her life by flowing after the expulsion of the afterbirth in her two last confinements, and was in great dread lest at that time it would be fatal to her. I requested her to be composed, and assured her that I would give her some medicine that would effectually prevent all danger of that sort. The labor was accomplished in two hours, and the moment the child was born, she took a dose of ergot in some weak cordial. The placenta came away readily, and she rapidly recovered from her confinement without any attack of flooding.

Same day, at evening, Mrs. B., of very fair complexion, and inclined to be corpulent; in labor with her fifth child, and delivered of a healthy daughter in half an hour after my arrival. As the uterus was slow in contracting, I applied a large napkin folded and dipped in cold water to the abdomen with a steady pressure. The afterbirth came away in about half an hour, and I enjoined absolute quiet. I was now requested to see another female residing very near, and just taken in labor, as soon as convenient, but did not go, having made it an invariable rule never to leave my patients, in the most favorable cases, in less than half an hour, or an hour, after the delivery of the placenta; as I have occasionally known the mother to appear comfortable for some time; the attendants, supposing all to be safe, give their entire attention to dressing the infant and arranging the apartment, when, all at once, she says she is flowing; on removing the cloths, or from some slight effort, there is a deluge of blood—she faints—all is confusion and consternation among the attendants, and without perfect self possession and prompt assistance she may be lost. Half an hour after the delivery

of the placenta I suspected she was flowing too much, and on applying my hand to the abdomen found the uterus considerably distended and the cloths wet with blood. I had prepared a dose of ergot for fear of accident, which was instantly given. The napkin was dipped in cold water again and applied with gentle pressure. She soon had pain; a quantity of fluid blood and clots were discharged, and the hemorrhage ceased immediately. I have had several other cases of this description which it would be but a repetition to relate.

I am far from attributing the uterine contraction in this and similar cases to the ergot alone, as I have often seen nearly the same results from cold and pressure to the abdomen, absolute quiet, &c.; but I am certain the contraction is much less prompt, and not so strong or lasting as from ergot. In abortions with flooding, and most cases of menorrhagia, I am convinced it may be used with the same good effect.

Dominick street, August 16, 1829.

ART. V. *Practical Remarks on Enlarged Tonsils; with a New Apparatus for their Removal, and a Plate.* By ABRAHAM L. COX, M. D.

ENLARGEMENT of the tonsil is an exceedingly prevalent complaint, and is sometimes the unsuspected cause of habitual quinsy, partial deafness, a peculiar guttural change in the voice, and continual difficulty of deglutition and respiration.

In many recent and transient swellings of these glands, no operation whatever is necessary, and in others of considerable tumefaction and inflammation, slight scarifications produce the most perfect relief.

There are cases, however, where, from the frequent recurrence of inflammations, or from some idiosyncrasy of constitution, these tumors become permanently enlarged, and occasion the symptoms already mentioned.

Partial deafness results from the pressure of the glands upon the orifice of the eustachian tube. Difficulty of deglutition is the consequence of the glands being themselves acted on by every attempt at swallowing. This occasions pain and inflammation in the surrounding tissues, and an aggravation of all the symptoms.

Sometimes the obstruction to respiration produces death. I was told by a medical gentleman who saw the patient,

that this result occurred in this city within the last two years. He said that the surgeon, who attempted to remove the swollen gland by a ligature, was forced to desist, in consequence of the patient being threatened with immediate suffocation, when an attempt was made to tighten the noose of the wire. The case was consequently abandoned, and the child became a victim to his disease. Similar danger I once saw, in the case of an old gentleman (perhaps seventy years of age) under the care of Dr. Physick, and my preceptor, Dr. Parrish, of Philadelphia. He came from the country to obtain relief from this disease, under which he had labored nearly all his life. He had paroxysms of difficulty of respiration, in which he appeared to be in imminent danger of suffocation. The glands had become very much elongated, were habitually swallowed, and adhered their whole length to the side of the throat; hence great difficulty was experienced in including them in a ligature. After several unsuccessful efforts, Dr. Physick at length was able to apply it round one of the glands; but the patient appeared in great suffering and danger from the operation. For a long time his breathing was excessively difficult; the face was livid and tumefied; and, though he recovered, to me he seemed to have incurred no inconsiderable hazard of life.

Great constitutional irritation and fretfulness of temper often accompany, in children, this disease; and the development of the intellectual faculties, as well as the growth of the body, is injured from the same cause. It often happens that children who are troubled but slightly in this way, when attacked with inflammatory diseases, as catarrh, scarlatina, measles, &c., suffer so great an enlargement of the tonsils, as not only to leave a very serious complaint, but very much to diminish the probability of their recovery, or greatly to contribute to the fatal termination of the case. Such is the unfortunate situation of a little patient now under my care. He has had scarlatina; but from the increased obstruction to respiration, the difficulty of swallowing, the impediment to the return of venous blood from the head, and the general irritation he endures, I cannot but fear for the result—that he will become a victim to their combined effects.

It is sometimes asked whether it would not be preferable, in children, to trust the case to the spontaneous change which nature produces in the progress of the constitution to maturity; or, in other words, to depend on the child's outgrowing the complaint. It must be admitted that, in many cases where the enlargement exists in infancy, the natural development of the size of the throat removes the glands farther

apart, and prevents that mechanical irritation which, at an early period, they produced on each other. In this way the tumefaction subsides, and perfect recovery follows. On the other hand, as in one of the cases already mentioned, we have an instance of the duration of the disease through a long lifetime, and, in old age, the patient was glad to submit to an operation rendered more severe by delay; and which, if performed in early life, would have secured to him years of health and enjoyment, which were passed in continual suffering and apprehension.

In all cases of doubt about the propriety of removing these glands in early life, where much suffering exists, if it were possible to effect an immediate removal by an operation free from harm and danger, it appears to me that no real objection could be urged against it. Such an operation I wish to recommend to the profession.

In some instances, the spontaneous cure itself is effected by a process most severe, and generally unsuspected, viz. the entire removal of the glands by frequent suppurations. A lady whom I know, was subject to severe and repeated attacks of quinsy during the early part of life. Abscesses formed in the throat, and were permitted to break. Her sufferings were indescribable, and were renewed by every change of weather, during five or six successive winters. No efficient treatment was, at any period, adopted; but, after this time, she was entirely exempt from her suffering. The present state of her throat explains perfectly how this result was effected. The space between the lateral half arches, occupied by the tonsils in the natural condition of the parts, is perfectly smooth. There are no remains of these organs. They have been ulcerated away; and the disease has thus painfully and tediously effected what a skillful operation would have done instantly without danger.

In another instance, where a patient had, during every winter, suffered from severe quinsy, the operation performed by the ligature on her tonsils produced complete immunity from further disease. This lady, a wealthy and respectable woman, assured the surgeon that, besides all her suffering during the preceding ten years, it had cost her, in doctors' fees, nearly one thousand dollars.

The usual methods of effecting the removal of the tonsils, are by the ligature and the knife.

The first method is unaccompanied by the danger of hemorrhage, but every modification of this plan is excessively painful. It is, also, not free from the liability of causing suffocation, particularly in the very cases where the

operation is most necessary; that is, where suffocation is threatened by the disease itself. In many of these instances, it is positively inadmissible. The pain occasioned by this process is, by no means, a small objection to it. There is no charge made against the character of a surgeon more dishonorable to him, than inhumanity in the wanton and brutal infliction of unnecessary pain. It would be an improvement in this branch of our profession, to rob every operation of its honor; and obtain the same splendid and salutary results without the agony and the danger which now necessarily accompany, in a greater or less degree, every surgical operation.

There are other objections to the use of the ligature in the removal of elongated tonsils. Several days elapse before each tumor sloughs away, and is removed from the throat. During the time that the putrefying mass occupies the fauces, an unhealthy and fetid fluid distils from it, and is liable to pass into the stomach, particularly during sleep. It injures digestion, and destroys, for some time, the health and comfort of the patient. Another inconvenience results from the ligature. The application, if made tight at once, is not capable of destroying the vitality of the whole mass. A considerable depth of surface is killed, and the absorbents remove it; but there remains still, in the centre, a projecting body, which it had been better to have removed at once, if possible, as it may still be the occasion of irritation, or the seat of future inflammations and disease.

The second method, by the knife, is less painful; but the danger of hemorrhage from the use of an unguarded bistoury, in a vicinity so vascular as the throat, agitated, too, during an operation by involuntary spasm, and where a ligature cannot be applied, though authorized by *Bertrandi*, and successfully practised by *Dupuytren* and others, is still by many, and, perhaps, the majority of the profession, very properly condemned. Fatal results have occurred from it, and I have been told by two gentlemen who have used it, that in both cases the actual cautery, (a most horrid and objectionable expedient, especially in the throat,) was the only thing which, in their opinion, prevented a fatal hemorrhage.

In consequence of objections to the usual methods of removing tonsils, several ingenious instruments have been introduced in order to apply the knife without injury to the adjoining parts. One of these, invented by the venerable and judicious *Dr. Physick*, is communicated in the *American Journal of Medical Science*, for February, 1828. *Dr. Caleb*

B. Matthews, in the *American Medical Recorder* for April of the same year, has given to the profession another most ingenious apparatus. It is not my intention to institute a comparison between these instruments and my own. They both obviate one great objection to the unguarded knife. The operation with them secures the truncation of the tumor, which is the proper method, while the surrounding parts are protected from any inadvertent injury. But whoever seizes the tumor with a hook, and proceeds to remove it with an unguarded bistoury, besides endangering the neighboring parts, will be likely to extirpate the whole gland, and thus necessarily cut the trunk of the artery which supplies it, before it has begun to ramify in its substance. Hence copious hemorrhage will necessarily result, and the actual cautery must be used.

There is one aspect in which the instruments before alluded to appear to me somewhat objectionable. They both take from the hand of the surgeon the proper guidance of the knife, and commit it to the operation of machinery. There are many possibilities in surgery which may require the motion of the knife to be modified in direction, force, &c., and to me it appears that no human contrivance can ever suit so admirably all the emergencies that may occur in an operation as the hand of the surgeon. It is, therefore, desirable in the introduction of new surgical instruments, to supersede as little as possible the use of that divine invention, the human hand.

Dr. Matthews does not say that he has performed any operation with his instrument, and though constructed on correct principles, it may, from a variety of causes, be utterly useless in practice. It is always desirable to know whether a new invention can be used; and this can never be absolutely decided, until it has been tried. The ligature has never but once been used by me in this case, and such was the suffering endured by my patient, as to induce me to attempt some less painful means. The result of a great deal of attention to this subject is now submitted to the profession in the instruments of which a plate and description are annexed. Twelve operations enable me to recommend them with confidence for their practical utility, and though several were performed with defective apparatus, yet there has never occurred any thing to weaken my confidence in the plan. Every operation has succeeded, and, indeed, has given instant relief. There has been no hemorrhage, nor have I ever been obliged to use astringents.

A few cases will, perhaps, best illustrate the facility with which relief can be afforded to the patient suffering with enlarged tonsils.

CASE I.—I was called by S. F. Randolph, Esq., April 26, 1828, to see a relative of his from the country, a boy of nine years old, whose tonsils completely filled the throat, pressing forward the uvula. The usual symptoms were all present, and he had not for three months been able to swallow a mouthful of animal food. His general health was still unimpaired. For the first time, I used my new instrument, in the presence of Dr. Alexander H. Smith, formerly my student, and Dr. Seaman. The right tonsil was included in the ring and completely filled it. The knife was made to follow the groove, and the tumor, as large as a pigeon's egg, was thus cut through without delay or difficulty. The operation was only momentary, and the little patient assured us that it was not painful, and complained only of the presence of the instrument in his throat, which induced efforts to vomit. There was only a little bloody saliva discharged. His breathing was immediately relieved, and he partook of animal food at dinner for the first time in a quarter of a year. No medicine or restraint whatever was directed, or at all necessary.

On the 29th, I removed the other tumor in the presence of Dr. C. C. Blatchley. Deafness, unnatural voice, difficulty of swallowing and breathing, and habitual sore throat, have, by this simple process, been immediately and permanently relieved.

CASE II.—On the 30th December, 1828, I was called to see a son of the Rev. Joshua Leavitt, of this city. He had large tonsils, which filled his throat, and for four years had prevented him from the use of animal food, a circumstance the more unfortunate, as he was of a scrofulous diathesis, and was rendered nervous and delicate by this privation. He labored under all the usual symptoms of this disease in an aggravated form. His father had consulted the late Dr. Nathan Smith, of New Haven, who declined the use of the ligature from the extreme delicacy of the child's constitution, and the severity of that operation. I removed the tumor on the right side in a few seconds, in the presence of Dr. Gilbert Heston; there was no hemorrhage. The little fellow (being a politician) fixed the fourth of March for the removal of the other swelling. In the mean time, his father called on me to give me this information, and stated that such was the relief his son had experienced from his former severe suffering, that were it necessary to its continuance he would will-

ingly subject him to the operation every month as long as he lived. On the day fixed for the removal of the second tumor, Drs. Bailey, Tomlinson, Torrey, and Ives were present. It was done in a few seconds, and the tumefaction having subsided since the first operation, it bled two or three drachms. This has been invariably the case in removing the second tumor. The irritation occasioned by the presence of the first being taken away, the other gland diminishes in size from absorption of the matter deposited during inflammation in its cells. The vessels bleed more freely, because the removal of this interstitial deposit permits the expansion of their mouths. It was very surprizing to me to observe no hemorrhage from the largest and reddest tumors, while the smaller were invariably both more difficult to cut, and discharged more blood; but on a little reflection it appears to be natural and easily accounted for.

CASE III.—February 24th, 1829. I was called by my friend, Dr. Downs, to see a little boy not nine years old, son of Mr. Townsend, near the Dry Dock. He had been nearly his whole life subject to swelled tonsils, and had suffered severely from them, but was thought by his friends to be in danger of immediate suffocation during the preceding night. The tumors not only filled the throat, but pushed forward into the mouth. I removed the right tumor in presence of Dr. Downs and Dr. Marvin. He was immediately relieved, and his throat on that side appeared unobstructed. On the 27th, I was sent for to see him; suffocation again threatened him. I found another tumor occupying the place from which the first was taken. It was removed with immediate and permanent relief. It is evident that in this case the tumefaction had separated each tumor into its two lobes. The anterior lobe was forced forward on each side, and the posterior one backward, because there was no room for them to swell across the throat, or in any other direction; hence they were torn to their base, and divided into two. After the first operation, the posterior lobe was out of sight for some time, and when removed, it bore the mark of having passed three quarters of an inch down the throat beyond its base. On the removal of the first, this came forward in one of the violent efforts of the parts and occupied its place, occasioning the removal of all the severer symptoms. From this case I have been led to draw two inferences; first, that the unavoidable tumefaction produced by a ligature would have caused death by strangulation; and second, that an unguarded knife where the tumors were so low down and the mouth and throat so exceedingly small, would have been not only highly dangerous,

but almost certainly fatal. On the 13th of March, I removed at one operation the two tumors formed by the separated lobes of the tonsil of the left side. They were taken away together, and were much smaller than in the former cases. They bled more than the first, but not more than two drachms were lost. I saw this patient in July; he was quite a different child; from a puny and delicate boy, remarkably small for his age, as he was in the winter, he had become uncommonly robust and healthful in his appearance, and his parents say that the operation constitutes an era in his life, since which he has been as remarkable for entire health as he was before for the entire want of it.

Description of the Instruments. The apparatus consists of several oval rings of different sizes, all adapted to a common handle, and two knives; to each ring is soldered a silver stem of one inch in length, with a screw at its extremity by which it is attached to the handle. The stem and handle make an obtuse angle with the plane of the ring, (figure 1,) and are thus prevented from interfering with the motion of the knife during the operation. On one face of the ring is a dovetailed groove, having the aperture widened near the stem, (at *c*,) to admit the beak of the knife, which slides easily along the groove, from which it cannot be extracted at any other part.

The knives resemble each other, with the difference that the beaks are placed on the opposite sides of the blade, (figures 3 and 4.) They are of the same length with the other instrument, viz. about seven inches. The handle and blade are of equal lengths; the cutting edge extends about an inch and a half from the point, and is concave. The beak (*d*) consists of a small piece of steel, of the shape of a pin's head, attached at right angles by a screw to the side of the end of the knife, and is adapted to move easily in the groove (*e*) on the face of the ring.

Directions for performing the operation. In performing the operation, the first object is to ascertain which ring will most exactly receive the tumor; this is to be screwed to the handle. The patient to be seated in a good light. The surgeon requires no spatula to depress the tongue. The ring may be used for this purpose until the tumor is seen. It should be then applied round it, taking care to keep the grooved face towards the cavity of the throat; then taking the knife whose beak is properly situated for the side on which he operates, the operator introduces the beak into the wide part of the grove, (*c*.) The knife should then be passed along the groove firmly upwards and onwards, till it reach the opposite

side of the ring, when its point must be pressed downwards, and thus round towards its starting place. The tumor falls into the mouth, and, by a little adroitness, may be brought out with the instruments.

The Scissors are for removing the extremity of the elongated uvula, and are decidedly the best instrument for the purpose. A plate of a similar pair may be found in S. Cooper's *First Lines of Surgery*, vol. 1, p. 528, New York edition.

It is due to the ingenious artist, to whose skill and perseverance so much of the success of this invention is owing, to state that, after an assurance from several of the absolute impracticability of making the instruments, owing to the difficulty of turning the rings, they were first perfected by Mr. John Wiegand, then of this city, since removed to Philadelphia. The workmanship has been universally pronounced, by competent judges, to be at least equal to any thing of its kind.

Explanation of the Plate.—Fig. 1. The instrument, by the ring at the end of which, the tonsil is surrounded, and held during the operation.

(a) The point at which the silver stem is screwed to the handle.

(b) The place where the silver stem is soldered to the ring at an obtuse angle.

Fig. 2. The tonsil knife for the left side.

(c) The termination of the cutting edge, which is concave to the point.

(d) The beak adapted to the groove on the face of the ring.

(e) The groove which conducts the beak of the knife around the tonsil. It is here a little widened to receive the beak.

Figs. 3 and 4. Profile views of the beaks at the ends of the knives.

Fig. 5. A convex edged knife, (on some accounts not so good as the other.)

Fig. 6. A pair of scissors with a transverse extremity to one of the blades, for removing a portion of the elongated uvula.

ART. VI. *Case of Fungus Hæmatodes.* By E. PIERCE, M. D., of Athens, N. Y.

ON the 15th March, 1829, the reporter, for the first time, was called to J. A. V. L., aged 30, whose right arm had been diseased since the early part of the preceding autumn. Six

years before, a tumor of a schirro-sarcomatous character, weighing about one pound, had been removed from the opposite arm by Dr. S. White, of Hudson. This tumor occupied the upper and inner portion of the arm, was deeply imbedded between the biceps and triceps muscles, having a firm attachment to the bone. The humeral artery was thrown from its natural situation between these muscles, and presented itself on the surface of the tumor through its whole extent, from the middle of the arm to near the axilla. The wound healed kindly, and the patient enjoyed perfect health till the last fall.

As a fact that may have some bearing on the question of hereditary predisposition, it may be interesting to state that the grandfather of this young gentleman died, some forty years since, of what was said to be a cancer of the eye. Whether genuine cancer, or fungus hæmatodes, the reporter has no means of ascertaining.

On examination at the time of the first mentioned date, a tumor was found on the right arm, occupying the space from just below the insertion of the deltoid muscle to the middle of the forearm, largest at the elbow joint, where its circumference was sixteen inches. The skin, over the parts affected, had, in some places, a natural appearance, but in most was discolored, presenting, in three distinct points, appearances of inflammation with unequal development. These points were, one on the inner side at the bend of the arm; another on the outside, directly over the ulna, its centre about two and a half inches below the olecranon, and, as the forearm was a little flexed, this point formed the angle; the third was on the under side of the arm, over and below the inner condyle. The tumor, generally, was hard and unyielding, and the veins enlarged and ramifying over its whole surface. The prominent points were less hard, and, to the touch, communicated a feeling of elasticity, somewhat resembling the indistinct fluctuation of deep seated matter. The joint admitted of no voluntary motion, and very little could be given it by the examiner. The olecranon, as well as the external condyle, could be distinctly felt; but the inner condyle could not be distinguished, owing to the last described prominence occupying this portion of the joint, and extending downwards.

General health not much impaired; appetite tolerably good; bowels regular, and has less pain in the affected part than formerly. As the tumefaction has rapidly increased since the subsidence of pain, it is probable that the fascia aponeurosis has burst at the prominent points,

relieving the pain by allowing a more free expansion of the tumor. From the commencement this disease had been considered rheumatic, and treated with various stimulating embrocations, ungu. tart. ant., &c.

After a careful and thorough examination, the patient was apprized that the nature of his disease had, probably, not been understood; that, from present appearances, and from the history, so far as related, fears were to be entertained that it was a case of fungus hæmatodes. At the same time, the character of this disease and its fatality were explained, and amputation advised as the only remedy. In farther conversation, the reporter expressed a hope that his fears might not be well founded, said he had never seen a case of this rare disease, and judged only by his recollection of cases reported by surgical writers, and concluded by recommending, as the best counsel in this section of the country, that professors S. White, and S. P. White, of Hudson, be called as soon as practicable.

March 16, saw the patient, in consultation with the Drs. White. The fears which had been expressed yesterday, were confirmed by the opinion of these gentlemen. Dr. S. White advised that preparations be made for amputation; that an incision be made in the prominence below the inner condyle, for the purpose of ascertaining, beyond all doubt, the nature of the tumor, and if of the kind suspected, to proceed, without delay, to remove the arm. The system, generally, as well as the limb, was in a good condition for the operation. The glands in the axilla, and all the parts above the insertion of the deltoid muscle, were in a sound state. The patient, at this time, would not consent to the operation; and, as his medical advisers had no confidence in any other means, the cure was left to nature.

March 31, have seen the patient at intervals of two or three days, ever since the last date. The swelling has been gradually increasing; the soft points developing, and the sense of fluctuation becoming more distinct. At this time, the point at the bend of the arm seems nearly ready to burst the integuments; and the patient has, for some days, been extremely anxious that it should be opened. This has been the advice of several practitioners who have been in attendance for the last two weeks, though not in company with the reporter, except by accident one was met this morning. In conversation with him, ascertained that it was the opinion of himself and associates, that the disease in question was scrofula, though two of them, only a few weeks before, had been treating it as rheumatism. By these advisers, the

patient had been encouraged to expect a cure, and, on the question of amputation, his mind had been made easy by assurance that, if ever necessary, it might be resorted to at a very late period, when all other means had proved ineffectual. This morning, on being again requested to open the prominence, which seemed most ready to this discharge, the reporter repeated his former remarks, that, in fungus hæmatodes, the longer the integuments remained entire the better; but as it was fast ulcerating, he would then consent to make the opening. Before, however, this was done, the patient and family were told, in presence of his medical consoler, that but little discharge was to be expected, and probably none of *healthy pus*; that the operation was resorted to, less with the view of giving relief to the arm by the discharge which might follow, than to satisfy him and his advisers in relation to the nature of the swelling. If fungus hæmatodes, but little except blood would follow the lancet, and the consequence would be a more rapid growth of the tumor; and if scrofula, as others had pronounced it, by their own concessions, the discharge would be profuse, followed by a reduction of pain and tumefaction. The arm now measured eighteen inches.

As the point of the lancet entered the skin, there was a flow of about three ounces of a thin adhesive serous fluid. On pushing it nearly half an inch deeper, an ounce or more of blood followed the lancet, mixed with the fluid above mentioned, when the discharge gradually ceased. A slip of adhesive plaster was thrown over the opening, and the poultices again applied. The medical adviser present, expressed himself satisfied as to the depth of the puncture, and agreed with the reporter, that it was inexpedient to open either of the other soft prominences. The patient and friends were now told that there could remain no doubt that the disease was fungus hæmatodes, and that the question of amputation was one on which he ought immediately to decide. If perfect confidence was not acceded to the opinion of the reporter, supported as it was by the respectable authority of the Drs. White, the patient was advised to consult the first surgeons of the city of New York. The boats had now commenced running, and the patient's health and pecuniary circumstances admitted of this resort.

April 12th. More than a week has elapsed since the reporter last saw the arm. Dr. — in the mean time having taken charge of the patient, adhering to his former opinion that the disease was scrofula, and assuming the entire responsibility by promising a cure. Called today for the pur-

pose of observing the progress of the disease, and was fortunate enough to be there a moment after Dr. — had made another opening about an inch and a half from the first, in the same prominence, but in a more dependant situation. From this opening was discharged principally blood and serous fluid mixed with a small quantity of matter of somewhat a purulent appearance. Passed the probe from one opening to the other. The tumor had increased in its circumference, and had also extended both upward and downward. The hand was œdematous.

April 17th. Saw the patient today by his request. General health much impaired; swelling and inflammation has extended to the shoulder, involving the glands in the axilla. Greatest circumference of the arm also increased; prostration of strength, profuse perspirations, &c. As the only proper time for amputating had now passed, the subject was not again proposed to the patient. Take sulph. quinin. and wine.

April 25. Since the last date little alteration has occurred. There is a regular hectic fever, with gradual prostration of strength. The inflammation in the course of the absorbents is subsiding, and the swelling is more concentrated about the bend of the arm; the hand is less œdematous, and the discharge from the orifices has considerably increased. Two more openings now exist; one was made with the lancet over the inner condyle, and the other has occurred by process of ulceration. The matter discharged is thin, and extremely fœtid. Size of the tumor still increasing, and now measures twenty inches. All the orifices bleed readily on the least touch with the finger or probe.

May 3d. The prominence below the elbow, which has been gradually increasing, was opened today by the physician under whose immediate care the patient has been since the first April. Nothing escaped but blood. The probe passed down to the ulna (three or four inches) with no more resistance than a clot of blood or mass of brain would oppose, and the resistance was no greater in any direction through the whole substance of the tumor. Discharge continues from the opening over the inner condyle with increasing fœtor; color more dark and muddy, sweating profuse, with increasing emaciation.

May 9th. Today there was a hemorrhage from the opening first made, and some six or eight ounces of blood lost; restrained by compress and bandages. Frequent nausea, with viscid and tenacious phlegm in the throat and fauces; increasing debility with oppressed respiration. At the re-

quest of the family, the reporter again took the daily charge of the patient.

May 14th. Since the last date the weather has been cool, and the patient, after recovering from the first shock of the hemorrhage, has rather recruited, complaining less of nausea and oppressed respiration. Takes freely of the quinine and wine. Size of the arm twenty-one inches. Discharge as last described.

May 20th. Today, hemorrhage from the ulcer over the inner condyle, mixed with the discharge from the abscess. Only a few ounces lost. The patient's strength has been gradually but constantly declining for the last week, and this evening seems nearly exhausted. There has been since the last date occasional oozing of blood from all the openings, which are rapidly enlarging from the absorption of the cuticle. The place of the absorbed skin is occupied by a spongy substance covered by thin layers of a cellular tissue, and this substance in some places is more prominent than the surrounding skin. This is particularly observable of the two first openings made, and which now form but one of about three inches in diameter. Here the morbid growth projects half an inch above the edge of the integuments bordering it. The whole extent of the tumor has been for some time gradually softening.

May 21st. The patient expired this afternoon, after a sudden hemorrhage with loss of twelve or sixteen ounces of blood. Coldness of the extremities, laborious respiration, and a sense of fainting had been increasing through the day, and death was hourly expected when the hemorrhage occurred.

Permission was obtained for post mortem examination, and notes of invitation forwarded by the reporter to each of the practitioners who had been consulted in the case. The artist Browrie was employed to sketch the morbid appearances, which was neatly and accurately done, before and while the medical gentlemen were assembling. This drawing accompanies the report, and exhibits the morbid appearances from different views of the diseased arm, both separately and in connection with the trunk and other arm. The appearances of different sections of the tumor are also represented.

Sectio Cadaveris—fifteen hours after death. The examination was conducted by the reporter, assisted by Dr. —, (who had formerly undertaken the cure under the name of scrofula,) a younger son of Dr. S. White, and two other medical students; professors White not being able to attend.

A longitudinal incision was first made through the whole length of the tumor passing through the middle of the large and protuberant spongy growth, described in the notes taken on the 20th instant, and by repeated strokes of the knife was carried down to the bone. The surface of this section could not be better described than by saying it closely resembled a longitudinal section of one of the hemispheres of the cerebrum, with the order of color reversed. The external part, for some inches in depth, resembled the medullary portion of the brain, both in color and consistency; color, perhaps, not quite so white, and consistency a little harder. The finger could, however, be pushed into any part of it with the greatest ease, and with no other obstruction than the cellular bands, which pretty freely intercepted each other throughout the whole mass. The resistance which these opposed was, however, easily overcome by the finger. The deeper seated portion strongly resembled the grayish cineritious color of the cortical portion of the brain. The muscles could not be seen, except at the extremities of the incision, and here they had a pale flabby appearance. Throughout the whole mass of the tumor, the muscles with their fasciæ were entirely converted into the brainlike substance above described. Occasionally a shade of the original muscle could be seen, but on touching it with the finger, the same soft, oily sensation was felt, as communicated by the other parts of the tumor.

A large abscess was found on the inner surface of the humerus and ulna, destroying the capsular ligament of this joint on the inner side, and denuding both bones of their periosteum for some distance. The capsular ligament of the radius, and also of the olecranon, was diseased, thickened, and softened. The abscess had discharged from the ulcers A and B, figure 2, but principally from the latter. The cellular substance beneath the skin was destroyed by the matter passing around the fungus from the abscess to the ulcers. A quart or more of a bloody, watery fluid was discharged since death, diminishing slightly the size of the tumor.

A lateral incision was also made, crossing the first at the prominent point. In this incision the cellular bands were more distinctly seen. The large prominence on the outer surface of the ulna presented, on examination, the same general appearances as already described. One or two small abscesses were found in the course of this incision, having no communication with the external opening made on the 3d instant.

Though there was not that rapid protrusion of fungus from the openings when first made, which is usually described in

fungus hæmatodes, yet from the constant and regular growth of the tumor from the commencement to its fatal termination; from its readiness to bleed when touched; from its almost constant oozing of blood for the last week; from the rapid protrusion of the main prominence for the few last days; from the repeated hemorrhage; and, finally, from all the appearances on dissection, there cannot, in conclusion, remain any doubt that this was a case of fungus hæmatodes.

ART. VII. *Two Cases of Disease and Dissection in Old Age.*

By A. L. PIERSON, M. D., of Salem, Mass.

THE following cases are interesting in several points of view, but especially as illustrating the observations which must have been made by many, that age is a comparative term when applied to the human body, and that one man's organs wear out in sixty years to a greater degree than another's will be found to do in ninety. This, of course, is owing to diversity of original formation, of occupation, of habits, and, especially, of temperaments and passions. The first case also shows, that imperfection may exist to a great degree in the structure of vital organs, and not be incompatible with the enjoyment of vigorous health. The subject of the first case was a person of large stature, athletic frame, and vigorous intellect, who had passed the principal part of his life in scenes of high political excitement; was ardent, fearless, and indefatigable. His eminent services and patriotic virtues will be long remembered in the history of our country. To a system of uniform temperance, he added the practice of brisk exercise in some laborious employment in the open air. To these means, and to the inheritance of a sound constitution, he was indebted for the possession of health, almost without interruption, until the occurrence of the short disease which terminated his life. He said in his last illness, that the last occasion on which he had taken medical advice was at the siege of Yorktown, at the close of the American war.

The subject of the second case was a remarkable instance of uniformity of life, of temperance, moderation, cheerfulness, and a remarkable freedom from all corroding cares and the excitements of passion. He was rather below the middle stature, and his principal exercise was walking, which he used daily till the last year of his life.

CASE I.—On the fourth of January, 1829, T. P., aged 84,

the subject of the following case, became chilled with the cold, which was intense, in attending divine service. Immediately commenced a loss of appetite, and wandering pains in the bowels; this was partially removed by laxatives and abstinence, but was renewed again by an imprudent exposure and improper food; and on the 19th of January my attendance was requested. At this time, there was a degree of abdominal pain, and the evacuations of the bowels were unsatisfactory; the tongue was thickly coated with a yellow fur, and the pulse somewhat full and a little irregular. There was considerable thirst; little or no heat of the skin; and the muscular strength was not perceptibly impaired. There was no cough, nor did it occur at any period of the disease. This was probably owing to the fact, that the function of the lungs was not *impeded*, but wholly destroyed, by the effusion, and that the inflammation only attacked the costal pleura. There was some degree of improvement for several days, under the use of purges, and the administration of a small dose of submuriate of mercury, with antimony and opium, every four hours. On the night of the 22d, there was some pain in the region of the heart, and he found his breathing easier in the erect posture, or rather leaning forward, than while in bed. The pain was not relieved by external applications, and by evening on the 23d became intense. He was bled to $\frac{3}{4}$ xiv., and leeches about vj. more, with complete relief of the pain and orthopnœa, which did not return. The pulse had now become increased in frequency and irregular in the highest degree. The respiration became more frequent and the muscular strength became rapidly prostrated. There was inability to lie on the left side, the easiest position being upon the back. During the remainder of the disease, the frequency and feebleness of the pulse increased, the difficulty of respiration was augmented, the impulse of the heart was very great and gave a visible motion to the whole thorax; the vital powers continued rapidly to decline till the morning of the 29th, when death took place without a struggle. The mental faculties, apparently, were not impaired for a single moment during the disease.

Examination six hours after death. Left side of thorax more full and prominent than right. On raising sternum, four pints of yellowish serum, with strong urinous smell, were found occupying left side of the thorax, and pressing lung of that side towards mediastinum; a considerable quantity of loose flocculent lymph was mixed with the serum.

The pleura costalis was highly vascular, and of a deep pur-

ple color throughout. At the lower part, bands of coagulable lymph, of a soft consistence, united the pleura costalis to the pericardium and the pleura of the lungs. In all other parts, the pleura pulmonalis exhibited but slightly the marks of inflammatory action.

The left lung much compressed and diminished in size; the superior lobe of the left lung crepitated naturally; the principal part of inferior and middle lobe solidified and heavier than water.

The heart small; the pericardium adherent throughout to the surface of the heart; a portion of the size of a dollar over the upper part of the left ventricle connected to the heart by a thin layer of bony matter; a small portion of fat at the apex; the walls of the heart were of a natural thickness, but darker colored than natural.

The right cavities of the heart were apparently natural; the lining membrane of the left auricle was natural, but portions of bone were found in the muscular substance, and one portion, the size of a filbert, near the base of the auriculo-ventricular valves. There were small points of ossification in the semilunar valves of the aorta, and at the commencement of this vessel.

The right lung was adherent throughout its whole extent, but without any appearance of recent inflammation. The superior lobe of the right lung contained portions of gritty, bony matter, mixed with much black, pulmonary matter.

The peritoneum, covering the bowels, exhibited slight increase of vascularity, and was of a darker color than was natural.

The omentum was natural, and contained but little fat.

The liver was of a lighter color than was natural, more hard, and surface granulated.

The spleen was natural.

The large intestines were contracted, and contained fecal matter in lumps. The mucous coat of the small intestines was covered with thick, tenacious mucus. Beneath the mucous coat the bowels were thickly studded with small granular, purple bodies, perhaps mucous glands. These, when cut into, nearly resembled coagulated blood.

The coats of the bladder were thickened, and prostate gland was unusually large.

The descending aorta was much ossified, and the internal iliac arteries were completely converted into bony tubes.

CASE II.—E. A. H., the subject of the following case,*

* This case has been published in a biographical memoir of the subject

passed his hundredth year in the enjoyment of his usual good health. November 24th, 1828, on returning from a short ride, he received an injury in his right leg in getting out of the carriage. The iron step struck him just below the knee, and turned down a triangular flap of skin of about two inches in length, an accident from which he was some time in recovering. After this period his health visibly declined, although he continued to exercise nearly as usual until the 25th of January, after which time he ceased to go out. About the close of November he began to experience pain about the region of the stomach, which for some time had a diurnal exacerbation at about 11 o'clock, A. M., with occasional hic-cough. This pain destroyed his usual cheerfulness and spirits, for an hour or more of each day, after which the depression passed off and his usual serenity returned. His pulse was not remarkably altered, except occasionally intermitting; a phenomenon which was common during several of the last years of his life. On the first of March he went into his chamber, although on that day he retained enough of vigor to dress himself as usual. From this time he was principally confined to his bed, and his appetite greatly diminished; but with the diminution of appetite, and consequently of food, the pain of the stomach abated. About fourteen days previous to his death, he was attacked with pain of the lower extremities, principally in the heel and great toe of the left foot. After five or six days of this pain, the skin of the parts most pained grew darker than natural, and at length complete sphacelus took place, ultimately extending to the knee. About a week before his death he suffered pain of the extremities in an intense degree, and on this occasion, in the course of twelve hours, he took 40 drops of acet. opii., which he bore well, and which had the effect of producing comparative ease. He now felt conscious that delirium was approaching, and mentioned that he should lose his senses, and had occasional periods of delirium till his death, which occurred at six o'clock of Tuesday, the 31st of March. On the Sunday previous to the day of his death, at ten A. M., he was raised in bed to discharge his urine, which he was not able to accomplish, and in four or five minutes fell back exhausted. Stupor immediately supervened, and he remained with his eyes partially closed, and unable to speak or swallow; the left side paralyzed, the right hand and arm frequently in motion, pulse hardly perceptible.

of it, the venerable Dr. Edward A. Holyoke, which has probably been met with by few only of the readers of this Journal.

The following are his own memoranda in referring to the state of his health for some time previous to his decease:

“I am now (February 9th, 1826) between 97 and 98 years old, and enjoy good health, excepting now and then a cramp in my lower extremities, which I have always been subject to, and the complaint I now attempt to describe.

“About ten or eleven years ago, I found that in walking I was apt to lose my equilibrium, and sometimes to stagger like one intoxicated, particularly if I looked up to see the town clock, or how the wind blew, in doing which I have several times nearly fallen to the ground. This complaint gradually increased.

“About two months past I perceived an odd and unusual sensation in my head when I suddenly changed my posture, which to my feeling was as if a moderately ponderous fluid fluctuated over the surface of the brain, and when I turned in my bed, I felt, as it were, a fluid flowing from the side I had been laying on, to the other side of my head. And when I sat up in bed, after having been awhile on my left side, I felt as if a fluid floated over to the right, and carried my head with considerable force along with it. When I lay my head down on my pillow at night, I have a sensation like what I suppose would result from the pressure of a fluid flowing down to the back of my head, and crowding it down hard upon the pillow; this sensation of crowding continues but three or four seconds, after which I feel no more of it till I alter my posture.

“One morning in November last, upon getting out of bed, the impetus of the fluid (if there is one) was so great as to throw me on the floor, though I exerted my utmost endeavor to keep myself on my feet; since which I have been more on my guard, and though I have never since been thrown to the ground, I have twice since been thrown into a chair which stood by the bed side, which saved me from falling. While I sit still I feel no complaint, but every sudden motion of the head is apt to produce a trace of it.

“This fluctuation, which never lasts more than a very few seconds, is not attended with the least degree of pain, nor any loss of consciousness even for a moment, nor am I sensible that the faculties of my mind are injured or affected by it, in the least; nor have I ever perceived any gyratory motion such as vertiginous patients complain of.

“Presuming that in order to our walking steadily it is necessary that the cranium be completely filled by the brain, and observing that persons greatly advanced in age were apt to walk unsteadily, to lose their balance, to stumble and fall, as is the case with me, I am led to suspect that the brain in such

subjects becomes shrivelled and contracted, and that from this cause a vacuity takes place.

“And may not a fluid be lodged between the dura and pia mater, without injuring the functions of the brain, if it be not so accumulated as to compress it?”

“When I first felt the fluid, it seemed as thin as water, and to shift its place as quickly as water would, but lately it appears in less quantity, and as if more viscid, and longer in passing from one side of my head to the other.

“I would observe further, that from my first feeling the propensity to stagger and stumble, the complaint has been invariably greater in the evening than in the fore part of the day.”

Examination of the body twenty-four hours after death.

Externally the body was found to be somewhat emaciated, the left leg sphacelated to the knee, the abdomen lank and dark colored, the thorax resounding naturally in every part, the scalp nearly denuded of hair. On dividing and turning back the scalp, which was very thin and delicate, not a single drop of blood flowed. Although the utmost care was taken in sawing the cranium, as soon as the saw penetrated the inner table, a transparent fluid began to flow, and, on removing the calvarium, it was found that the dura mater was adherent to the bone nearly throughout its whole extent, an alteration which did not seem to depend on disease, the distinction between the two tables of the cranium entirely obliterated, and the texture of the bone more dense than common. The tunica arachnoidea was very firm and opaque; the veins beneath it were very small, containing but little blood. The brain was very firm and dense, and the convolutions very strongly marked; the sulci were wide and deep. The color was somewhat darker than common, and the whole feeling and appearance of the brain were as if it had been subjected to the action of alcohol. A small quantity of serous fluid was found beneath the tunica arachnoidea. The cortical portion of the brain was extremely thin, being less than an eighth of an inch in thickness. In the ventricles nothing unusual was discovered. The pineal gland was extremely small, and contained no particle of gritty matter. The cerebellum was thought to be disproportionately small.

On removing the sternum, the lungs collapsed throughout, and exhibited the cavity of the thorax of unusual capaciousness. The cartilages were ossified, but were easily divided by a strong knife. The pleuræ appeared perfectly free from every mark of disease, except in both sides of the thorax there was adhesion at the apex of the lung for a small extent;

at this part a very superficial portion of both lungs was hepaticized, but without any mark of recent disease. Spots of black pulmonary matter were very abundant on the surface of the lungs. The substance of the lungs was free from disease, with the exception above stated.

The heart was of small size and without fat. The pericardium was adherent to a small part of its anterior surface at the base. The cavities were examined in the course of the blood from the right auricle to the aorta, and no alteration of structure from the most perfectly healthy state could be discovered in the walls of the cavities, the fossa ovalis, the tricuspid valves, the semilunar of the pulmonary artery, the mitral valves, and the semilunar or sigmoid of the aorta, except, perhaps, that these latter discovered a slight degree of rigidity at their attached margin, but by no means such as to interfere with their flexibility and free motion. The arch of the aorta, and several inches of its descending portion, were found to be in perfectly healthy condition, except two or three needle like spiculæ of bone.

On opening the abdomen, the stomach appeared smaller than common, and contracted about its middle, as if a band were tied round it, and at this part its coats felt solid and much thickened. On opening the stomach, it was found that its middle portion, including about a third of its extent, and making a complete circumference of the viscus, presented the appearance of scirrhus, and was contracted so as hardly to admit the passage of a finger. This contraction divided the stomach into two portions, of which the superior or cardiac portion was the most diseased. The mucous coat was corrugated, and dark colored, with ecchymosed spots and points. About the middle of the great curvature was a superficial ulcer of an inch in diameter. The pylorus, the cardiac orifice, and the œsophagus, were in a healthy condition.

The liver was natural—the gall bladder enlarged to twice its natural size, filled with thin chocolate colored bile, and a calculus of the size and shape of a small nutmeg. The gall ducts pervious and natural. The spleen was adherent to the diaphragm and omentum, was externally firm, white, and of a cartilaginous appearance, and its internal substance dark colored and semifluid. Small intestines contracted, dark colored, and resembling in color the sphacelated limb. On the mucous coat, which was chocolate colored, the blood vessels were very turgid, the valvulæ conniventes slightly thickened. The large intestines were more free from disease, the valve of the cœcum perfectly natural in structure. Both kidneys contained on their surface and in their substance several small

hydatids. The ureters were pervious and natural. The bladder was filled with urine, and presented a perfectly natural structure, except the interlacement of the fibres of the muscular coat was more distinct and prominent than common. The prostate gland was not enlarged, and presented nothing unnatural to the feeling.

It is, perhaps, a fact worth noticing, that there should have been so little derangement of structure in the parts last described, which are so commonly diseased, in advanced life. On the evening before his death, his motions indicating uneasiness about the bladder, his urine was evacuated with a catheter. Not the least difficulty was experienced in passing the instrument.

The descending aorta and the iliac arteries were flexible and free from ossification.

ART. VIII. *Some Observations on the Remittent Fever of Marshy Grounds, as observed at Forts Jackson and St. Philippe, during the Summer and Fall of 1827.* In a Letter from G. ANDERBACH, M. D., of New Orleans, to Captain RICHARD DELAFIELD, of the U. S. Engineers.

BEING aware, sir, of the zeal with which you prosecute the study of the topography of this country, and having myself witnessed the attention you bestow upon every object conducive to the health and comforts of the inhabitants of the forts under your direction, I could not be astonished at the request you made me, some time since, respecting the fevers that prevail among them with such frequency, as almost to entitle them to the appellation of endemic. You desire, above all, some information upon the remittent fever, with which you were yourself attacked, after an exposure of several hours to the influence of the effluviæ emanating from the excavation, under a burning sun. You had scarcely escaped the fury of the yellow fever, when you exposed yourself to the devouring grasp of a disease which, though not possessed of so terrific a name, is no less serious and singular.

But, considering my limited experience and my inability to write, how can I presume to give you a report worthy of your attention? I will, therefore, confine myself to a few remarks which have no other merit than that of being the conclusions deduced from the facts I have observed, and from events that have occurred under your own eyes.

The forts Jackson and St. Philippe are situated on the banks of the Mississippi, opposite one another, and surrounded by a semicircular range of marshes, lagunes, and other masses of stagnant water. The soil is everywhere covered with alluvia, containing enormous trunks of trees half rotten, and some remnants of shells and other animal and vegetable substances. This soil abounding in so many substances that are constantly exposed to chemical decompositions and recompositions, from the influence of dampness and heat, often reflects an odor of vegeto-animal fermentation, so strong as to produce a sort of giddiness, especially after lying for some time on the ground. The presence of a large quantity of hydrogen and carbonic acid is not surprizing, but azote is also contained in a certain proportion. Having repeated, at Fort Jackson, the experiments made by the celebrated anatomist, Mascagni, on the presence of azote in the condensed vapors emanating from the marshes of Tuscany, (*le maremme*,) I have obtained nearly the same results. Here, as in that country, the vapors contain much of a matter which is greasy, oily, and disagreeable to the taste, and acting like an acid on the paper of tournesol, after leaving it exposed to the contact of the air. This matter often floats on the water in the form of distinct drops.

The geographical latitude, the nature of the soil, the frequency of southern and easterly winds, which obstruct the course of the Mississippi, and propel its redundant water over the marshy grounds, the periodical inundations, the constant humidity, the thick fogs, the vast quantity of wood in decomposition—all these circumstances are sufficient to explain the insalubrity of the country. But there exists another which possesses considerable influence over the health of the inhabitants of the forts; it is that, for several years past, excavations have constantly been made for the purpose of erecting new fortifications, or preserving the old ones. The ground thus laid bare, perhaps for the first time since its formation, exhales a great proportion of humidity and obnoxious gases, while it abundantly absorbs the oxygen of the surrounding air. But let us lay aside these physico-chemical reflections, more or less theoretical, and enter into medical facts.

From the month of July to the commencement of December, 1827, a particular fever prevailed among the inhabitants of the forts. Fortunately for them, the garrison of Fort St. Philippe had already retired to Bay St. Lewis, leaving behind only one sergeant, and a few soldiers with their

families, and half a dozen workmen with their wives and children. At Fort Jackson nearly all the white portion of the workmen had been sent off early; there remained but some negroes and other people of color, with a few whites, officers, and journeymen, all acclimated. Without this precaution on the part of the commanding officers, a most dreadful epidemic would, no doubt, have prevailed.

I will now give you a description of the epidemic *remittent fever of marshy grounds*, to which I have alluded. The following were the principal symptoms :

Pain in the head, as if the brain were compressed in all its extent; eyes very red and irritable; the face of a bluish red, and indicating great suffering; very strong pulsation of the temporal arteries, dischronical with that of the heart; palpitation of the heart so strong that it could be heard at five paces from the patient; pulsation at the epigastrium; impossibility of lying on the left side; very evident pulsation of all the small arteries of the extremities, of which the patient complained as of a painful and disheartening sensation; sometimes the veins themselves appeared also to participate in this general pulsation of all the vascular system. The pulse at the wrist was frequently intermittent, and rather tense than hard.

The thoracic viscera seemed also to suffer, but not primitively. The voice was trembling, very quick, interrupted, as if for want of strength in the pronunciation; frequent sighing; short and dry cough; sensation of strangulation at the larynx; inexpressible anxiety; faintings; dumb pain about the præcordia; vague pain in the left arm; the extremities of the fingers as if numb; hands frequently cold and bluish.

The tongue was invariably natural; or, at the utmost, somewhat more red than usual, in the first five days of the disease. It was not until this period, and particularly after the use of evacuants, that it became loaded. The abdomen was supple; the alvine discharges very rare and blackish; urine scanty; skin dry, frequently changing its temperature; sometimes it became cold, and perfectly blue; but the patient did not, nevertheless, cease to complain of great heat; at other times he would experience shiverings when his skin was burning.

The prostration of muscular strength was extreme; sleep almost none during the first four or five days. The patients were constantly harassed by frightful dreams; sometimes they jumped out of bed, under the fear of being choaked or prosecuted. One of them jumped into water, and came out

of it more delirious than before. But they generally knew well those who addressed them.

About the sixth or seventh day, the symptoms became more and more gastric; the tongue loaded; the mouth bitter; breath fetid; urine and fæces darker, more copious, and offensive to the smell; the skin less burning; the pains about the head and extremities diminished, and others manifested themselves at the epigastrium, and continued until the thirteenth or fourteenth day.

The remissions became more regular, and gradually changed into intermissions. The extraordinary pulsations ceased, except the palpitations of the heart, attendant on the fever from the beginning to the end, which continued to annoy even the convalescents for several weeks after the cure. Sometimes a painful sensation at the heart, and a short cough, accompanied this disorder of the heart, which had become chronic.

The disease proved fatal only in three cases. One of them was that of a soldier who, in a fit of violent delirium, threw himself into the water, and died eighteen hours after, with the symptoms of an *apoplexy of the heart*, (if I may use this expression of Bichat.) Another was that of a serjeant laboring, for some time previous, under a pulmonary phthisis, who, from the complication of two diseases affecting, the one primitively, the other secondarily, the respiratory organs, sunk under a fit of asthma. The third was that of a carpenter, who poisoned himself with enormous doses of calomel. When he died, he had all his mouth and throat corroded by mercurial ulcers.

General bleeding, which seemed indicated as much by the violence of the fever, as by the symptoms of congestion of blood in the brain and in the heart, never failed, however, to exasperate the evil. Topical bloodletting, especially leeches at the temples and anus, sometimes relieved the headache, but only for a little time, as it returned again at every new exacerbation of the fever.

Emetics, during the periods of exacerbation, increased the congestion and pain; they were more beneficial during the remissions, but never brought on very copious evacuations of bile. Drastics exhibited before the tongue became loaded, increased the orthopnoea and anxiety. Opium then procured no sleep, but renewed the dreams. The treatment which I found the most appropriate was the following:

The first and second days of the disease, I gave, during the remission, an emetic of ipecac. and tart. ant. The latter was continued largely diluted during the three first days;

drastic enemata, four to six times a day; acidulated, sudorific drinks towards evening; semi-balnea and pediluvia with mustard; general lotions with warm water, lemon juice, sometimes camphorated spirit.

From the third, to the fifth and sixth days, I applied blisters to the calves of the legs and back of the head; Dover's powder; sometimes purgative ptisans with nitre, or emulsions with camphor, nitre, and syrup of poppies. But the most efficacious remedy I employed then, was the tincture of digitalis, given until the pulse was much diminished in frequency, and until repeated vomitings proved its narcotic effect.

At this time, which was generally the seventh day, besides continuing the use of the revulsives and derivatives at the skin, and especially the extremities, I gave tonic purgatives, and, as soon as an intermission of the fever had occurred, the sulphate of quinine, combined in the evening with the syrup of morphia.

On the eleventh or fourteenth day, I gave calomel and rhubarb in large doses; for, as the fever and symptoms of congestion in the heart diminished, the disease appeared to assume the character of a bilious fever.

I closed the treatment by large doses of quinine with the infusion of calamus aromaticus; but, in most cases, I was compelled to continue the digitalis in small doses, in order to relieve the convalescents from the palpitations of the heart, which sometimes annoyed them to despair.

Queries. Why was not bleeding of any use against so decided a congestion of blood in the brain and heart?

Can a congestion of blood be continued for so long a time in organs so important, without exciting in them real inflammation?

ART. IX. *Remarks on Burns.* By RICHARD K. HOFFMAN, Surgeon U. S. Navy. Being his Inaugural Thesis for the degree of M. D., submitted to the College of Physicians and Surgeons of New York, in 1820.

WE shall employ the term burns, to express all injuries produced by the application of a pernicious quantity of uncombined caloric, whether it be applied by the medium of a solid, liquid, or gas; it will, of course, include scalds and scorches.

To present a more clear and comprehensive view of the

subject, we shall, first, enquire into the opinions and practice of some of the older writers, from which the practice we recommend will derive some support; secondly, we shall proceed to exhibit the diversified and very opposite modes of authors on the subject of burns, with the theories which treatment recommended by the modern and most recent they entertained—to show that these theories are unsatisfactory, and lead to an improper practice; and thirdly, by adducing facts to prove that a stimulant plan of local treatment is the best—that it has principle for its foundation; and to reduce these facts, and this practice, to an approved theory, new in its application to burns.

We shall carry our retrospective view only to the end of the sixteenth century. Fernelius, who wrote about this period, and his successor, Fabricius Hildanus, thought that in order to cure burns, it was only necessary to extract the empyreuma, or the fixed fire, from the burnt part. With these intentions, Fernelius recommends, as possessing refrigerating qualities, water, vinegar, oxycrate, the juice of the house-leek, (*sempervivum*,) lettuce, (*lactuca*,) &c., bolus armena, mixed with distilled water or oxycrate, the solution of alum in water with the addition of the white of eggs, common writing ink (the gallate of iron) diluted with water; and these he directs to be procured without delay, and to be applied *warm*. He also advises that the burnt parts *should be held near the fire, which he regards as the true remedy* (*alexiterium*) for the evil it produces; which operates by extracting the empyreuma, and thus allaying pain. Arum and leeks are lauded as efficacious remedies, and he ascribes miraculously curative powers to a mixture of onions and salt, or oil and salt, applied locally.* He gives a long catalogue of topical remedies, on the utility of which he bestows his sanction. What we would remark is, that he advises them to be applied warm; and that his conviction of the efficacy of topical remedies alone, is implied by his silence on the subject of general or constitutional treatment, on which he says not a word.

Hildanus says, that the various remedies in use among practitioners and plebeians, whether they be plasters, ointments, juices, or distilled waters, “*ad hunc finem tendunt, nimirum, ut empyreuma, sive calorem ab igne in parte affecta relictum, aut suffocent, aut resolvent et dissipent.*” Again, p. 921, “*Quam primus quis igne, aqua, aut oleo fervido, aut*

* *Cepæ eumsale contusæ, ambustæ perti impositæ miraculo persauant; oleum quoque sale addito idem efficit.*—*Therapeutice Universalis*, p. 321.

simili quapiam re combustus, ac combustio levis fuerit, illico locus ambustus aqua, aut proprio sputo madefiat, et ad ignem admoveatur, ut incalescat, quantum ferre poterit; vel in *aquam calidam* iminergat locum ambustum, aut si id fieri nequit, intuigatur spongia, aut luiteum reduplicatum, in aqua calida et applicetur loco ambusto." The curative operation of external heat he explains as follows: "Calor enim ille externus, empyreuma hoc est calorem, ab igne, in parte combusta, relictum, ad se attrahit, ul Aristoteles et experientia testantur. Quemadmodum enim contusus scorpio, ictui suo impositus, venenum proprium ad se attrahit, sic calor calorem, huic *cepæ in mortario cum sale contusæ*, et illico loco combusto applicatæ empyreuma extrahunt nec sinunt ut pustulæ eleventur."

Basilicon ointment is a predominant ingredient in the various compositions recommended by Hildanus, as local applications, which possess stimulating qualities. There are few exceptions, in which he thought the treatment should be modified, as in burns of the eyes and face. These topical remedies act as repellants, and he advises bleeding, purging, and cupping to effect a revulsion of the blood and humors from the part affected.

Serjeant Chirurgeon Richard Wiseman, whose book is dedicated to Charles II., observes in the appendix, "that if the burn be superficial it raiseth the cuticula up in blisters; if it go deeper into the skin it causes an eschar; if it burn deeper into the flesh, the force of the fire makes a hard crust, with a contraction. In all these the pain is excessive."

The indications of cure are of two kinds, viz. either by refrigerants to bathe and anoint the parts, until the heat be off and the eschar separated, and then to digest and cicatrize; or, by *calefactive medicaments*, to relax the skin, and resolve and dissipate it, which will *assuage* the heat and burning. The refrigerants are aqua solani, plantaquis, hyoscyami, lac ebutyratum; and all the cooling juices and unguents, as unguentum album, nutritum, &c.; these must be used *warm* until the heat and pain cease, or the fire be taken out, as the common expression is. *Hot medicaments assuage* the fiery heat and pain by rarefaction, which, in the first place, may be done by holding a burning hot iron, or fire, to the part; so while the *fire calls forth that fire it made*, it becomes its alexiterium; but the common remedy, he observes, is to *apply salt and an onion beaten together*."

Where the parts are burnt to an eschar, we are to hasten its fall with emollients, then digest, incarn, and cicatrize. He recommends bleeding, purging, and a spare diet, to check

the tension to the part; and in one of the interesting cases of burns from gunpowder which he has recorded, says the *patient should have been let blood, but would not*; that the fever was great by reason of the pain, and adds, it happily cicatrized this young gentleman's ulcers even and smooth, without the least inequality, nothing remaining but the red color to make it discernible.

The authors, whose opinions and practice in burns we have thus briefly explained, were conspicuous at the end of the sixteenth and middle of the seventeenth centuries. They ascribed phlegmon or inflammation (see Wiseman, p. 14) to constitutional causes; to a plethora, with an acrimonious mixture of serum in the blood. The cause of burns being so entirely different, the identity of inflammation and burns, which has since been so generally admitted, seems not to have occurred to them; but in the intentions of cure, according to Hildanus and Wiseman, depletion by bleeding and purging was common to both.

Professor Heister, the systematic writer of the beginning of the last century, particularly directs the attention to the analogy between inflammation and burns. He observes, "I believe no one will be offended at our treating of burns as a *species of inflammation*, since the appearance as well as consequence of both are exactly the same." He divides burns or scalds into four degrees: the first and slightest is that which occasions heat, pain, and a small vesication on the injured part in a short time; the second degree is when the part is instantly affected with great pain and vesication; the third is when the common integuments and subjacent flesh are so burnt that they form a crust; the fourth and last is where every thing is destroyed quite down to the bone. The third species is nearly allied to gangrene; the fourth to a sphacelus; this illustrates the near relation between burns and inflammation. In the first degree of burns, he recommends *spirits of wine, vel vulgaris, vel rectificatus, vel et camphoratus*, to disperse them, (or cure by what we may call the first intention,) and with the same view advises the *brine of pickled cabbage*,* or oxycrate boiled with salt, and applied warm. *Oleum teribinthinæ*, he says, has very good effects. We would ask, in this place, if these applications could be beneficial in an *increased action* of the part? and if the following advice is not in contradiction to that theory? To hold the burnt part as long as can be borne near the fire, or if the finger be burnt, over a candle, is the vulgar method, he

* *Muria brassicæ conditæ.*

observes, but which is often done with success. We would remark, that this is still a common practice among our blacksmiths, and as it is founded on the experience of its good effects, may be adduced as an argument against the theory of an increased action of the vessels of the part affected. "For the *stagnating fluids* are, (says professor Heister,) by the force of the fire, drawn back into their proper channels, and by this means the vesications, and other troublesome symptoms which usually succeed, are happily prevented."

There is another method of cure which is equally efficacious, though founded on a contrary intention. This is by emollient remedies, which remove the tension of the fibres and vessels, and restore the blood to its natural course before any bad symptoms come on. The injured part may be fomented with water *as hot as the patient can bear it*, till the pain and heat entirely disappear. Sydenham highly recommends this practice, continues professor Heister, with great justice. The fomentations will be improved if you boil some emollient ingredients in the water, as althea, semen lini, mali cydonii semina, &c. But emollient cataplasms are of the highest service in this case, if frequently laid on the parts affected, *as warm as they can be endured*. Emollient oils have their use in forwarding this intention, as oleum lini, amygdalarum dulcium, olivarium, liliorum alborum, hyoscyami, and the like. These oils are to be used by dipping rags into them, and applying them to the burnt parts. We must not omit to mention, says Heister, a famous liniment of Mynwettus, which he calls his linimentum ad ambustiones. This is composed ex oleo lini, vel olivarum cum albumine ovi mixto, and applied as the oils above. Mucilage of quince seed is properly enough prescribed in this case. *The remedies we have here recommended never give effectual relief unless frequently repeated.*

In the second degree of burns, attended with vesication and great pain, he advises the frequently renewed application of one of the remedies prescribed above, as warm water, spirits of wine, burnt wine, which will quickly remove the heat and pain, and detach the cuticle from the true skin, without leaving any deformity. But if the pain still continue, emollients, as linseed oil, or the ointment of Mynwettus, are to be used, and the parts afterwards to be dressed with emplastrum de minio.

What follows we think (as will afterwards appear) to be a reprehensible practice, and inconsistent with the astringent and stimulating applications which Prof. Heister approves of. "If the injury," says he, "be very considerable as to its

extent, and a great part of the body is scalded or burnt, it will be necessary to *open a vein, and bleed even ad animi deliquium*, and afterwards prescribe a brisk purge, abstemious diet," &c.

In the third degree of burns, where the part is covered with a crust or eschar, warm emollient applications are recommended to promote suppuration.

On the supposition that a practitioner had no other authority to direct his proceeding in the treatment of burns, than that of Fernelius, Hildanus, Wiseman, and Heister, he *would be justified in giving a preference to topical applications of a stimulating kind*; the composition of salt and onions was in high repute with Fernelius and Hildanus, and is sanctioned by Wiseman. This preference to stimulant local treatment would be given notwithstanding "the variety and opposite nature of the remedies recommended by Heister;" for even his evidence inclines to its support. Should we hesitate, however, in making a choice of local remedies, where so many are approved of, we would be freed from this perplexity in deciding on the general treatment; bleeding, purging, and a low diet being approved of by a too common consent.

Among the aphorisms of the learned Boerhaave, are the following:*

"If actual fire, or any thing which conceals fire, is applied to our bodies, there follows a *destruction* of the small vessels, and an extravasation of their humors, varying according to the difference and duration, of the cause and of the nature of the part affected.

"The different degrees of these several effects from burning resemble those observed from the first and slightest degree of an inflammation, till it degenerates into the worst and most severe sphacelus. Hence the phenomena or symptoms, the diagnosis and prognosis, are the same in both."

In these deductions of the celebrated Boerhaave, the consideration of the cause of disease, which is important to the establishment of judicious practice, is too little regarded. Diseases produced by internal and constitutional causes, and by causes acting locally and from without, are confounded in one general view, and reduced to common principles of practice. It is the general belief in the similarity of burns and inflammation, and the associated idea of an increased action of the parts, which, we think, have led to a pernicious anti-phlogistic plan of treatment.

* See Van Swieten's Commentaries, vol. 4, p. 180, et sequent.

“In the cure, also,” says the same distinguished author, “there is no difference, and more especially the antiphlogistic drinks proper for inflammation are always necessary in burns.

“Burning or scalding within the limits of a resolvable inflammation, is to be treated with such *remedies as preserve, or, as it were, pickle the juices*, and put them into motion; (the *muria brassicæ conditæ*, recommended by Dr. Heister, would be an admirable application for this purpose;) and by such things as open and preserve the vessels; and this is performed by a moderate *degree of fire*, by fomentation and cataplasm, by washed butter, or, lastly, *with spirits of wine* and a little vitriol.

“A burn which tends to gangrene, which may be known from the skin being already turned into a crust, or else corroded and elevated into blisters, is to be treated as an inflammation of the same nature, namely, by fomentations, and cataplasms of emollient and digestive remedies.”

The commentaries on these aphorisms, by his industrious successor the baron Van Swieten, would extend this thesis beyond its proper limits; like the text itself, they cannot be read without leaving on the mind an impression unfavorable to the author, as it is unsatisfactory to the reader. Although burns are identified in their several degrees with the different stages of inflammation, our judgment is confused from the manifest want of a rational principle to direct us in the treatment of them.

The profession has long been teased with empirical practice in burns. “The vague state of medical science and practice in these cases,” has been often exposed, and we think it still holds good, the zealous attempt of a very recent author* to disprove it, to the contrary notwithstanding.

Baron Van Swieten has expressed this opinion as follows: “But what seems a little surprizing is, that even the best surgeons should recommend medicines of opposite virtues in these accidents, namely, emollients and astringents, attractives and repellants.”

This able commentator, we would remark, enforces the propriety of applying the remedies warm, with the observation, “that things actually cold are observed to be mischievous in burns.” P. 190.

This contradictory practice, which it will be our object to prevent, will be seen in a more conspicuous light as we concentrate it from some of the subsequent writers on the sub-

* Mr. Nodes Dickinson.

ject, and in none more than from the systematic work of Mr. Benjamin Bell.*

“In the treatment of every variety of burns,” says Mr. Bell, “our first object is to procure ease as quickly as possible. Where the skin is not destroyed, but seems to suffer merely from irritation, an abatement of pain may be procured by the application of remedies of very *different*, and even very *opposite*, natures. By dipping the part affected in *very cold water*, and keeping it for some time immersed in it, the pain will often be rendered very supportable. While, on the other hand, a considerable degree of ease may be procured by plunging the injured part suddenly *into boiling water*, or *any other fluid of nearly an equal degree of heat*. Emollients are often employed, and in some cases they procure immediate relief, *but, in general, astringent applications prove much more successful*; one of the best to every burn of this kind is brandy, or any other ardent spirits; it seems to induce a momentary additional pain, but this soon subsides, and is succeeded by an agreeable soothing sensation. *It proves most successful when the parts can be immersed in it*; but when this cannot be done, they should be kept constantly moist with pieces of old linen soaked in spirits. The acetum lytharg., a strong solution of sacch. saturni, or Goulard’s saturnine water, make useful applications for the same purpose; and as a proof that it is the astringency of the remedy, from which the effects result, the same benefit is derived from a strong solution of alum, or even from common ink.”

“When, again, burns are, from the first, attended with loss of substance, as usually happens when they are produced by the application of hot metallic bodies, cooling emollient applications prove most effectual, and the parts being constantly kept moist with a liniment composed of equal parts of lime water and linseed oil, often gives immediate ease, and the easiest way of applying it, is to daub the part frequently over with a soft pencil well soaked in it. The application and removal of even the softest coverings is often productive of much pain, and I have always found in burns of this kind, that their being exposed to the air does not, for the first two or three days, do any harm; on the contrary, it often gives relief, when no advantage is derived from any application. But as soon as the *pain and irritation* produced by the burn are removed, the parts should be covered, and treated in the same manner as ulcers proceeding from any other cause. The liniment, (Mr. Bell continues,) which I

have mentioned, of lime water and linseed oil, is, perhaps, the best application that has yet been employed in burns of this kind. In some cases, however, I have found that more immediate ease has been procured from the application of Goulard's cerate,* or the unguentum nutritum, and a weak solution of sacch. saturni has sometimes proved successful."

From the above extracts it is too apparent, that Mr. Bell, whose work we may suppose to contain a summary of the opinions and practice of his contemporaries, has made no advancement towards the establishment of rational principles to direct our practice in burns; and we may remark with Dr. Kentish, "that we might as well write the different applications on slips of paper, roll them up, shake them in a bag, and dip for our chance, as to expect to be guided by a well formed judgment" from Mr. Bell's chapter.

His approbation of the use of cold water, is an addition to "the variety and opposite nature of the remedies recommended by Heister," and could only increase the embarrassment which a person, ignorant of the treatment of burns, would experience, were he to consult Mr. Bell's work for his guide.

As to the medical treatment, Mr. Bell followed the fashionable practice of bleeding, and other "remedies adapted to the particular symptoms." In this indefinite expression, we presume, he meant to imply the whole of the antiphlogistic regimen.

But if the vague state of the practice in burns were disputed, a strong presumptive proof of it is furnished by the different plans of treatment that are described, and which we find condensed in Mr. Samuel Cooper's excellent work of reference, the Dictionary of Practical Surgery—such as sir James Earle's plan, Mr. Cleghorn's plan, and Dr. Kentish's plan. We will now proceed to a consideration of these, and more particularly of the theories and practice of Dr. Kentish.

Mr. Cleghorn was a brewer in Ebinburgh. He communicated his observations and practice in burns to the celebrated Mr. Hunter, who has recorded them in the second volume of Medical Facts and Observations. He advises the immediate application of vinegar, which is to be continued for some hours until the pain abates, when the burn is so severe as to have destroyed any part; when the pain shall have ceased, it is to be covered with a poultice, which must remain six or eight hours. When that is removed, the part is to be entirely covered with very finely powdered chalk, so

* Compound cerate of acetated lithrage.

as to remove every appearance of moisture on the surface of the sore, when it is again to be covered with a poultice. These applications are to be removed every night and morning until the cure is complete. If the use of the poultice appears to relax the wounds too much, they are to be covered with a plaster, or ointment, containing *white lead*, but the chalk is still to be used next the sore. "In respect to general remedies, (says Mr. Cleghorn,) I allow my patients to eat boiled or roasted fowl, or, in short, any plain dressed meat they like, and I do not object to their taking, with moderation, however, wine, water, and spirits, ale, porter, &c.; my applications, as hath been already observed, allay pain and inflammation, and, also, *always either prevent or remove feverishness*, and, at the same time, (if one may judge from their effects,) they have powerful antiseptic virtues. *I have never had occasion to order bark or any internal medicines* whatever, and I have only once thought it necessary to let blood. When the patient was costive, Mr. Cleghorn endeavored to obviate it by suitable diet, sometimes by injection, but never used purgatives, which he thought more frequently carried off useful than hurtful humors.

In cold weather in particular, Mr. Cleghorn's practice was to apply the vinegar a little warmed, and place his patients near the fire, giving them something warm internally, and keeping them, in every respect, as comfortable as possible; his object was to prevent the occurrence of tremblings and chilliness, (and these, I may remark, will almost invariably attend very extensive burns,) and which in two cases alarmed him a good deal after applying vinegar too cold. He recommends in all severe cases to apply the vinegar warm.

It is a little remarkable that an unprofessional man should have first observed the inutility of the then prevailing antiphlogistic plan of treatment. He had no favorite hypothesis to support, and was an unprejudiced observer; the facts noted in his experience, are original and important; they accord with the principles, and can be explained by the theory, which we shall inculcate and adopt.

We will now turn our attention from the soothing practice which the humble Mr. Cleghorn pursued, and, with a feeling of dissatisfaction which we cannot suppress, make some observations on the refrigerating practice inculcated by sir James Earle. Mr. Thomson observes that cold is a remedy which has *long* been employed to diminish the inflammation of superficial burns. Rhazes directs that, in recent burns, cloths dipped in cold water, or in rose water cooled with snow, be applied as soon as possible to the parts

which have been injured, and that these cloths be renewed from time to time; and Avicenna says, that this practice often prevents the formation of blisters. The practice, however, as we have shown, had long fallen into disrepute.

The great object of sir James Earle's essay appears to have been to advocate the practice of sir Walter Farquhar, of applying ice in the treatment of burns. Like Fernelius, Hildanus, and Wiseman, sir James founded his curative intentions on the supposition that the fire or caloric remained united to the part. For a time such appeared to sir James to be the fact; but whether modern philosophers would allow it, he thought very questionable. It follows, then, that the sooner the ice is applied after the accident has happened, the better, as the fire will have less time to do mischief. The older writers whom we have mentioned employed warm applications, and fire itself, for this purpose, which they regarded as the remedy for the evils it produces; and Wiseman, speaking of *refrigerants*, says, these must be used *warm* until the heat and pain cease, or the fire be taken out, as the common expression is, else they will rather cause pain. But sir James proceeds to extract the fire, as we would cool a red hot bar of iron; and, indeed, he adopted a most effectual way of doing it; but, unfortunately, in this limited view, he seems to have lost sight of the body as an animated machine. If the fire or caloric do remain in the part, it must be either free, or in a state of chemical union; if in the former state, in the ordinary temperature of the air, unless the laws of its distribution be peculiar in this instance, it would soon pass off, and the skin would preserve such a degree of temperature, as might be derived from the heat generating process of the system itself. If the caloric be chemically combined, the peculiar condition of the part must be changed, before the heat could be disengaged. But without discussing the opinion whether heat remains in the part or not, experience shows, or rather reason dictates, that if an attempt were made to abstract this supposed heat, by applying ice to a large extent of burnt surface, not only the morbid heat, but the natural salutary heat of the body, would be carried off; and that rigors and shivering would result, which, should they not destroy life itself, would excite a struggle between its preservative powers, and the injuring cause, which would powerfully tend to exhaust their energy. An infant or an adult might possibly endure an application of ice to a hand or an arm for a few hours; but what would be the probable consequence? Its vital powers would be so far reduced, or its excitability so much accumulated, that

when the application of ice should be desisted from, the stimulus of heat imparted to it from the system, by the small remains of circulating blood, would perhaps excite inflammation, and terminate in the death of the part. The temporary application of ice to the scrotum, followed by the moderately stimulating application of a warm poultice, professor Mott tells us, has induced sphacelus of the part; but if some two thirds of the surface of the body (and burns often occupy a larger extent of it than this) were to be covered with ice, what animated being could tolerate it, without the loss of life. Without any acquaintance with the particulars of the the cases in which sir James Earle, with the approbation of sir Walter Farquhar, pursued this practice, we should, from the nature of the application, infer that his experience of its effects must have been very limited, and the burns that he treated, still more limited in extent; or his practice would have extinguished not only the fire, which was supposed to "lie rankling" in the part, but the vital heat itself, the *vis medicatrix, vel conservatrix naturæ* to the contrary notwithstanding. The cases which sir James Earle has recorded, would, with a few exceptions, have been cured by Perkins's metallic tractors, or what perhaps is the same thing, by the unassisted power alluded to above. "I know," says Dr. Kentish, "that nature possesses a power of curing burns to a certain extent, unaided; nay, farther, that she can cure burns in spite of all the malpractices of officious ignorance."

In the case of the poor woman who, in a fit, fell into the fire, and burnt her neck, back, and breasts, where this refrigerating and antiphlogistic practice was pursued, a fatal termination occurred at the end of three weeks.

Mr. Gibbon has said, that the inhabitants of Naples seem to dwell on the confines of paradise and hell fire. The object of sir James Earle seems to have been to rescue his patients from the one, and transport them to the other. With what success, or gratification to the patients, we will leave the reader to judge.

It appears from sir James Earle's essay, which was published in 1799, that the essay of Dr. Kentish, on the same subject, had not fallen under his observation, although it had been published nearly three years prior to his own. The principles inculcated by Dr. Kentish, which are in direct opposition to those of his immediate predecessors, and the important innovation in practice that he has endeavored to establish, claim a more particular consideration.

From experiments to which Dr. Kentish subjected himself

in a bath heated to a temperature of from 100° to 116° Fahrenheit, he concludes "there is no doubt but the most common and most decided effects of heat upon the system, are to quicken the circulation of the blood, and increase the sensibility of the whole system. If caloric be gradually applied, the increased action is propagated from the point of contact to the rest of the system; but if the heat be suddenly and violently applied, the parts of the vessels with which it comes in contact lose their organization, and cease to be conductors. Thus, parts of vessels which, a moment before the application of caloric to them, were circulating fluids, and propagating nervous feeling, on a sudden cease to act, and become inert and dead matter, attached to the living parts of the same vessels. To disengage the dead parts from the living, requires a peculiar process of the system. But there are various degrees between a high increased action and the total disorganization of the part. It seldom or never happens that a part can be so totally and suddenly destroyed, but that some of the adjoining parts will have a sufficient quantity of caloric applied to them, as to come within the limits of mere *increased action*.

As the injured parts in burns present a state of increased action, according to the views of Dr. Kentish, (as well as of other writers on the subject,) he assumes that a disparity subsists between the general action of the system, and that of the injured part; and that as the action of the part is *morbidly increased*, it must continue to be excited—it must not be rapidly, but, on the contrary, very gradually, lowered; while the natural healthy actions of the general system must be excited in such a degree, as will overcome the disparity, by raising the general action of the system to the morbid excess of action in the injured part.

The inefficiency, indeed the injurious effect, of the depleting antiphlogistic treatment, especially in extensive burns, determined Dr. Kentish to abandon the then prevailing doctrines on the subject, and to adopt the general principles as above stated. To explain these more fully, together with the practice pursued by Dr. Kentish, we shall give his own words.

"Injuries caused by a pernicious quantity of caloric suddenly applied to any part of the body, if the foregoing premises are just, ought to be called *local injuries from increased action*; most scalds are of this nature. The mode of relief in these dreadful accidents, therefore, will be *to restore the unity of action between the morbidly increased action of the part, and the rest of the system*; 1st, by gradually diminish-

ing the increased action of the part ; and 2d, by increasing the general action of the system. Thus," continues Dr. K., "the disparity of action between the injured part and the rest would be less ; consequently it would lead to a more speedy cure.

"With this intention, holding the part to the fire is a very rational mode of relief: but as parts of the body may be injured where a cure by such means could not be carried into effect, it will be necessary to have recourse to other means. The strongest essential oils, the highest rectified spirit with essential oil, to which caloric may be added, also, are the species of applications calculated to do good, and to give the speediest and most effectual relief. *These remedies* are generally regarded, and used, as the *strongest stimulants*." The writer, as will appear, regards them as such ; but they are neither considered nor used as such by Dr. Kentish. "They are here used," Dr. K. continues, "as *sedatives*, or powders less stimulant than those which produce the injury. These means are meant only for a limited time after the accident, and are then to be succeeded by milder applications ; for, if the use of these were persisted in, they would cease to be sedative, and would excite an irritation similar to that which they were at first intended to relieve."

The internal means of relief will be to administer those substances which will, in the quickest and speediest manner possible, throw the heart and arteries into the most violent action compatible with life. Thus, large doses of æther, volatile alkali, ardent spirit, opium, wine, &c., given in hot water, are what should be administered in the first instance. By these direct stimulants internally, the circulation will be carried to the greatest possible degree of quickness, by which means there will be infinitely less disparity of action between the part excited by the burn, and the general system, than by any other manner of treatment. By thus restoring a unity of action between the excited part and the rest, the cure is to be performed. "Should these premises be granted," says Dr. Kentish, "the following will be the law upon which injuries, arising from too great a quantity of caloric, should be conducted, namely :

"That any part of the system having its action increased to a very high degree, must continue to be excited, although in a less degree, either by the stimulus which caused the increased action, or some other having the nearest similarity to it ; until, by degrees, the extraordinary action subsides into the ordinary action of the part."

He divides burns into two varieties—

1. Injuries from caloric where the action of parts is only increased.

2. Injuries from caloric where the action of parts is increased, and the organization of some other parts destroyed.

"I never saw," says Dr. K., "an injury of this kind where some parts were totally destroyed, but it produced, upon other adjoining parts, an increased action. Now, as it is our duty to save the living parts, or those which have their action only increased, *our mode of treatment must always be the same.* To a disorganized part, or to an eschar, it is of no consequence what we apply; for the surface to which such application is made is dead, and incapable of being acted upon from without.

"There may be a difference in the degrees of injury, but there can be no difference in the kind. A small or a large surface may have its action increased; but still the injury will be one of increased action. A small or large part of the system may be disorganized; this will, therefore, class with injuries where parts are destroyed.

"As I found from experience," says Dr. Kentish, "that the antiphlogistic plan, at the commencement, was erroneous, I began to apprehend I might be equally wrong in other parts of the treatment. To ascertain this, I determined to alter the latter part of the treatment. It was not long before I had a favorable case for the experiment; accordingly, after I had urged on the system to the point of suppuration, I desisted from the use of excitants; and I had the pleasing satisfaction to observe that the secretion of pus diminished, in a degree I never could produce before, and the healing process proceeded with a rapidity I had never as yet witnessed."

Dr. Kentish thus totally inverted the antecedent methods of treatment. The soothing means which had been so generally inculcated by writers, in the beginning, both externally and internally, are totally departed from, as well as the method of exciting the system when suppuration had taken place, under the idea of supporting the patient under the discharge. In this stage Dr. Kentish kept up a counter irritation by cathartics, and sometimes even let blood.

By attention to these general principles, Dr. Kentish asserts, that he has cured many extensive burns in one, two, three, or four weeks, which, by the former method, would have required as many months; and some, also, which he can assert, (and the writer freely admits the assertion,) would have been incurable by the former method.

We will next explain, more particularly, the mode of treatment practised and recommended by Dr. Kentish.

First, of those cases where the action of a part is only increased.

Local Treatment. In this, Dr. Kentish directs us to proceed as follows:

Take a tea cup, or any convenient vessel, into which put some essence of turpentine; place it in a basin of hot water, so as to communicate such a degree of heat as you can well bear with your finger. Dr. Kentish prefers the essence of turpentine from its producing the least cold by evaporation; but if it is not at hand, alcohol may be substituted, or any substance of which alcohol forms a constituent part, as camphorated spirits of wine, lavender water, brandy, rum, or Geneva. These are to be applied by means of a rag dipped into the liquid, or a probe armed with lint, and used as a brush. When this has been plentifully done, the injured parts are to be covered with plasters formed in the following manner:

Take of yellow basilicon, according to the occasion; let it be rubbed upon a marble slab, with as much of the essence of turpentine as will bring it to the consistence of a soft ointment. Plasters are to be spread with this ointment, and applied as soon after the wash as possible, to prevent the pernicious chilling effects of evaporation. These are to be thickly spread, and are not to be removed in less than twenty-four hours after the first dressing, when the injured parts are again to be examined; it will be necessary to have fresh plasters ready spread, previously to exposing the burnt surface. Only one plaster should be taken off at a time, and that immediately replaced. In some instances, Dr. Kentish says, it may be necessary to repeat the wash with heated essence of turpentine on the second day, but, in general, a wash with some heated tincture of opium will be preferable. At the third dressing, (twenty-four hours are supposed to have intervened between each,) the appearances, Dr. K. assures us, will have much changed. Many inflamed parts will have disappeared, being cured, if I may be permitted so to express myself, by the first intention; others, which were more injured and had slight vesications produced at the first, will now have such a secretion of pus as we frequently observe on the second day after the application of a blister. In superficial burns, having about the third or fourth day produced the above effects, it will be necessary to change the mode of treatment; for, if these means were continued they would cease to be curative. Milder applications are to be substituted. Ceratum lapid, calamin, or Goulard's cerate, are good in this stage of the injury. If unpleasant irritation should

have been excited by the use of the remedies recommended, a soft bread and milk poultice will speedily remove it, or a plaster of ceratum flavum may be applied.

Constitutional Treatment. While these local remedies are employed, stimulants are to be given internally, with the view of increasing the general action and lessening the disparity of the whole. Dr. K. accordingly recommends hot spirits and water, either brandy, rum, or gin, with 60 or 100 drops of the tincture of opium, and a tea spoonful of sal volatile, or ether, to be taken. The patient to be put to bed, between warm blankets, and if the shivering be considerable, to apply bottles of hot water to the soles of the feet and pit of the stomach. By thus stimulating the general system, and gradually lowering the excessive action of the part, the restoration of the equilibrium of action in the whole, or, in other words, the cure, will be facilitated.

When the system, according to this plan, shall have been stimulated to the *greatest extent compatible with life*, during twenty-four hours, the excitement should be lessened. On the following day, negus, with an occasional opiate, should be administered, if the pain continue. As secretion frequently appears on the third day, the necessity for stimulants will cease, and it will be necessary to change the mode of treatment.

Saline purgative medicines should now be given, both with a view, says Dr. Kentish, to tranquillize the system under the *inordinate action* excited by the stimulants, and to lessen the secretion of pus.

In the second variety or division, "where some parts have only increased action, while other parts are destroyed," it is only necessary to pay attention to the living parts; and as these living parts class with the species of those parts which have increased action, the same means must be used in both cases; but Dr. Kentish advises us not to lower the action of the system so soon as where there is only increased action, as the process of detaching the dead parts from the living requires the constitution to be supported. Warm stimulating poultices may be applied, if the eschar be conveniently situated, to accelerate their sloughing.

Dr. Kentish encountered much difficulty at first in moderating the secretion of pus, (which is very abundant,) from these suppurating surfaces; but observing the effects of a spontaneous diarrhœa, which occurred in one of his patients under these circumstances, he drew an important practical inference from this effort of nature, which influenced his future practice. As usual, he had allowed his patients a gene-

rous diet in this suppurating stage, with the view of supporting their strength under the profuse discharge of pus; under this accidental diarrhœa, however, he observed the secretion of pus to be in a great degree suspended, and the skinning process to be more rapid than he had ever before witnessed. This accident, Dr. Kentish says, not only convinced him that he had before been wrong in exciting the system, but also showed him the advantage that might be derived from instituting a counter irritation. "I have benefited, (says Dr. K.) by this lesson, and have produced very marked good effects by imitating nature. Smart cathartic doses of calomel and jalap I have found to produce such counter irritation as greatly facilitated the process of healing. Much assistance, (he continues,) may be acquired by paying attention to the state of secretion on the surface of wounds, and by irritating other surfaces, a quiescent state of the sore may be produced that wonderfully favors the formation of skin." The use of chalk applied to the part, Dr. K. found to be a powerful auxiliary. Carbonate of lime, he observes, not only acts as an absorbent in a superior manner to the lint which is in general use with most surgeons, but it seems to coagulate and unite with the gluten of the secreted fluid, and thus forms the basis of the new cuticle, or shell, which nature provides for her defence.

Dr. Kentish has endeavored to strengthen his principles by arguments derived from the appropriate treatment of frost bitten parts.

"On a review of the phenomena which take place in the disease termed frost bitten, we perceive," says Dr. K., "that it depends on a cessation of action in the vessels of the part, or parts, exposed to the sudden diminution of temperature, or the deficiency of the stimulus of heat. The mode of relief in this accident is a cautious and gradual restoration of the action of the part, by small additions of temperature, until it can bear the accustomed heat, and take up the action of the vessels to which it is attached; thus restoring unity of action to the whole system."

The best practice in these cases we know to be that of rubbing the parts affected with snow at first, and then employing cold water. But the practice has been explained *in various ways*; that of restoring the unity of action, is the principle which Dr. K. has adopted, and he applies, as we have seen, the same principle to the treatment of burns. Surgeon Dickenson, whose essay on burns will next come under our consideration, denies that any disparity of action is induced in either case; that the general circulation is de-

pressed in proportion as the circulation of the part is languid, and vice versa. We are disposed to admit that a disparity of action may be induced—if not, a foot or a hand could not be frozen—or the circulation of these parts suspended by the abstraction of heat, without arresting the circulation of the whole system.

Professor Hosack remarks in his lectures that, by cold, is meant both the sensation of cold, and a real diminution of temperature. Sensation depends on the condition of the nervous system: cold is relative; it depends on our previous temperature; the same degree of temperature, in different conditions of the body, will excite the sensation of heat and of cold. These relative effects of heat and cold should be known before we treat asphyxia from cold, or *frozen limbs*. To these we first apply snow, which is comparatively warm; next cold water; and, upon the same principle, *stimulants* of spirits of wine or of turpentine, are applied to *burns*, as being next in degree of violence or action. They constitute the next grade of stimulus, &c.

Doctor Wilson Philip, in his work on febrile diseases, has made the following remarks, applicable to this subject:

“There is one case which deserves notice, as particularly illustrating a law of the animal system, by which it is rendered morbidly sensible to any of the *natural agents*, in consequence of its usual application, or its application in the usual degree, being interrupted, without becoming more sensible to the action of any other.”

Again, the application of snow to frost bitten parts, and of stimulants to burns, has Brunonian principles to sanction it:

“This mutual relation obtains between excitability and excitement, that the more weakly the exciting powers have acted, or the less the stimulus has been, the more abundant the excitability; the more powerful the stimulus of the agents, the excitability becomes more exhausted.”

The oil of turpentine, we may now observe, is the application which we prefer, and will recommend in burns. The observations here made, are intended to countenance the use of this remedy.

Whether all and each of the above assumed principles be fundamental truths or not, we shall not presume to decide, nor, indeed, to call in question. We would only observe, that as Dr. Kentish stimulates the whole system, and disapproves of bleeding in burns, he ought, on his principles, to bleed in frost bite.

We are sorry, however, that we cannot take leave of Dr. Kentish, without the reflection, that his principles (not his

practice) appear to us to carry their own refutation in the very face of them. Pouring down hot brandy, and throwing the heart and arteries into the greatest possible action compatible with life, is surely not calculated to lessen *increased action*, unless through the intervention of mortification.

But if we examine the actual practice of Dr. Kentish, as detailed in his cases, it will be found not to correspond with his theoretical injunctions. Those who were the subjects of his practice were, for the most part, young colliers, to whose habits, Dr. Kentish says, "a generous diet is congenial—they live well, when well; and they think that what does them good in health, cannot do them harm when they are ill, if they have the inclination to take it, and the ability to get it." In patients whose previous habits have been rather intemperate, a free use of stimulants would be the more admissible; and, in all cases of severe burns, stimulants will be necessary to counteract the depression they produce. Dr. Kentish, finding stimulating local applications more beneficial than mild and sedative remedies, and the antiphlogistic general treatment injurious, especially in the more extensive burns, appears to have been at a loss for a rationale of the fact, and adopted the principles we have explained. On this subject Mr. Samuel Cooper observes, that Mr. Kentish's theories are certainly *visionary*; they may amuse the fancy, but can never improve the judgment. He is a man, however, who has had superior opportunities of observing this part of practice; and *the great success of his plan of treatment* has acquired very extensive approbation, although, he adds, there are still many practitioners who prefer the common methods, and the antiphlogistic principles. Our distinguished countryman, the late Dr. Dorsey, while he highly commended the application of the unguent-terebinthin., pronounced the theory of Dr. Kentish by no means satisfactory.

The profession owe their acknowledgments to Dr. Kentish, for the important innovation in the treatment of burns, for which they are indebted to him. Fernelius, it is true, more than two centuries ago, confided in *topical* applications of a stimulating nature—a mixture of onions and salt, or oil and salt, particularly; but this merits no other consideration, than as it tends to confirm the correctness of Dr. Kentish's practice, and accords with our opinions on the subject.

A more recent author,* Mr. Dickinson, now claims our

* Remarks on Burns and Scalds, by Nodds Dickinson, of the Royal College of Surgeons, Staff Surgeon to his Britannic Majesty's Forces, &c. London, 1818.

attention. With a zeal highly commendable, Mr. D. attempts to disprove the charge of a vague state of medical science and practice, in burns and scalds; and to show that the *alleged* varied and opposite modes of treatment have a *common principle* for this foundation; that from the operation of spirituous and aqueous, hot and cold, applications, there is, in truth, a similarity of result arising from the effect which each produces, of abstracting heat from the part, and *diminishing vascular action*. Although his practice, in cases of severe burns, accords very nearly with that of Dr. Kentish, his principles differ materially. According to Mr. Dickinson's views, burns rank among the phlegmasiæ; and, as they vary in their degree or severity, they also differ in *kind*. According to their degree, within certain limits, (and it is to be wished the author had drawn the boundary line more distinctly,) the local as well as the general affection is purely inflammatory; beyond these (indefinite) limits of severity, the increased excitement produced by the potent stimulus of caloric is rapidly succeeded by general debility, insomuch, that mortification and death will be liable to ensue, from sudden exhaustion of the vital powers. The contrast between this theory, and that advocated by Dr. Kentish, is apparent. The latter, it is true, supposes the local action increased, but the general action not harmonizing with this, a disparity of action is assumed as the result; and the indications of cure, as we have seen, are directed to restore the unity of action between the part and the whole system. Mr. Dickinson asserts that the general system sympathizes directly with the part affected; and denies the possible existence of a disparity of action, either in the case of burns or frost bite, from which latter we have seen that Dr. Kentish derived analogical arguments to support his doctrine.

In one *kind* of burns we find Mr. D. inculcating the whole of the antiphlogistic treatment; and, in another kind, *stimulating treatment locally and generally*.

It appears very difficult to abandon the idea of increased action, which is so intimately associated with the mere mention of a burn, or inflammation. Mr. Kentish admitted (we must repeat it) an excessively *increased action in the parts*, and still we find these remarks in his own work. Certain it is, that the idea of inflammation in burns has influenced the opinions and practice of all writers, from the earliest periods of medical history, to the present time.* “All the combined

* We have seen that Heister first ventured to describe a burn as an inflammation; φλεγμον, or inflammation, was derived from the analogy between burning and inflammation, in the medical sense of the word.

means to overcome increased action, present themselves to the mind," says Dr. Kentish! "the moment the term inflammation is mentioned; and this magical term is always accompanied with the idea of bleeding, purging, and a low diet."

If increased action did exist, we would ask Dr. Kentish if the practice, which he condemns, would not be much more rational than that which he approves? Indeed Dr. Kentish is reduced to the necessity of denying that a burn is an inflammation. "As it appears to me," Dr. Kentish observes, "that the too general acceptance of the similarity of burns and inflammation, has led to erroneous conclusions, I must, therefore, venture to deny that a burn is an inflammation, though it may, in its consequences, produce an inflammation."

[To be Continued.]

ART. X. *Remarks on the Advantages of Pathological Anatomy*. By FRANCIS O. DOUCET, M. D., of New York. (Read before the New York Medico-Chirurgical Society.)

BICHAT, by the creation of general anatomy, gave a new direction to the study of the pathological structure of the human body; and all his immortal writings are replete with his ideas on this science; but it must be confessed that his premature death did not allow him to carry it to that perfection it would undoubtedly have reached under his masterly and unrelenting efforts. In 1803, M. Dupuytren gave his first course of pathological anatomy, the first which had ever been delivered on that particular branch of medicine. Being at that time the head of the anatomical department in the French metropolis, he assembled together all its diffused materials; and, disregarding the organs themselves, the anatomical and nosological classifications, he applied himself exclusively to the nature of the alterations of texture, and the symptoms that accompany them; and established the various species, genera, orders, and classes of organic lesions, thereby raising pathological anatomy to the dignity of a science.

Autopsy has revealed all the positive knowledge we possess of the secrets of life. The art of opening dead bodies is of a recent date. It has been productive of the most beneficial consequences, and overthrown many of the nosographical foundations. Are we, then, to consider the science which has resulted from those labors as the basis of medicine? Is pathological anatomy destined to perform such

brilliant achievements? Does it really point out the nature of diseases, as well as their most speedy and certain modes of cure? May it not become a source of errors, and lead to baneful results? Has it greatly diminished the bills of mortality, (laying aside the consequence of the discovery of vaccination?) It may, it is true, enable us to form a more correct idea of the forms and physical results of diseases; but can we say that we cure phthisis, tetanus, cancer, hydrophobia, and many other dangerous and long standing pathological affections, more frequently than our ancestors?

During several ages, physicians paid but little attention to ascertaining the seat of the affected organ, and never sought knowledge from the mortal remains of the unhappy victims; but, giving full sway to their imagination, and overstepping the limits of facts, they multiplied almost ad infinitum the number of the genera and species of those complaints. When the necessity began gradually to be felt of confirming facts derived from chemical observation, by the test of post mortem examinations, physicians at last were enabled to overcome the difficulty, and pathological anatomy afforded them the means.

We will examine what influence pathological anatomy possesses in elucidating the diagnosis in fevers, neuroses, hemorrhagies, and phlegmasies.

Pinel locates the mucous fevers in the primæ viæ, and asserts that, in bilious fever, there exists an irritation of the stomach with that of the liver. Some time after him, a new *pyretological* doctrine appeared, founded upon the principle that all essential fevers are but inflammations of the mucous membranes, especially of that of the stomach. M. Broussais, its author, bestowed a particular share of attention on the mucous surface of the stomach and intestines, and found it inflamed in a great variety of cases, where no phlegmasia had been at all suspected. He adduced a great number of proofs, both theoretical and practical, in support of his opinion; and derived great benefit from a strict adherence to the two following requisite qualifications—the habit of a scrupulous observation of the phenomena of disease during life, and a careful examination of the state of the parts after death. A particular organic affection, which was not sought for nor even suspected, is discovered; a viscus, presumed to have been healthy, is found to be the seat of a profound alteration of tissue; certain phenomena of pathology which it had been found impossible to account for at the bedside of the patient, are brought to light in the dissecting room.

It was a question whether all the essential fevers produce

such organic lesions as may be apparent after death; and whether several of them might not prove mortal without leaving evident marks of inflammation in the *primæ viæ*. Arsenic often causes death with an astonishing rapidity, without the appearance of the least vestige of phlegmasia, and we know that, in the more intense cases of yellow fever, the intestines are not always found inflamed.

If pathological anatomy has been unable to account for the various forms and succession of symptoms, it has improved the diagnosis and the treatment in fevers. The inattentive physician sometimes performed a cure; but more frequently he kept up and exasperated the disease by means of bark, purgatives, and the most violent repulsives, and navigated at random on an ocean of uncertainty.

The analogy between these diseases and inflammations is demonstrated by the opening of dead bodies, and the danger of such destructive methods is immediately recognized. The physician learns that he is to treat irritations by means appropriate to their nature, such as regimen, diluents, mucilaginous substances, evacuations of blood with a judicious employment of revulsives and tonics.

The improvements in pathological anatomy have added but little to what we already knew of the nature of the diseases of those nervous branches connected with the cerebral functions, the digestive and the other sets of organs.

Several physicians think, with some apparent plausibility of reasoning, that neuralgiæ are but phlegmasiæ; but the affected nerves, examined after death, have shown no evident marks of inflammation; some pretend that they are affected with a sort of dropsy; others that their fibres are found with an œdematous cellular tissue. The volume of those nerves has been found considerably increased, their vessels developed, and affected with a sort of varicose dilatation; and, in most cases, nothing has been seen at all. Even where the nerve presents some organic lesion, it remains to be determined whether that lesion is a cause or an effect.

Well conducted post mortem examinations have greatly improved the theory of apoplexy, which is the ordinary effect of most cerebral irritations; pathological anatomy has taught that an effusion of blood in the brain, is not necessarily mortal. Morgagni had already suspected the means employed by nature, for preventing the consequences of that grave accident. M. Rochoux has described the various disorders arising from extravasations of blood in the brain; and shown that they usually take place in the substance of the organ,

sometimes on its surface, or that of the ventricles. M. Riobé says, that apoplexy, wherein the blood escapes into the centre of the brain, is susceptible of cure; a particular membrane is formed around the extravasated blood which is dissolved by the serous fluid secreted by that membrane. The blood being thus dissolved, is taken up by the vessels of the accidental membrane, and at last totally disappears. Numerous cases of palsy, the material cause of which is an extravasation of blood in the brain, are gradually cured in consequence of the absorption of the fluid. The organization of those membranous cysts, and their successive transformation, have been discovered; analogy has led to the presumption that they were the product of a gelatino-albuminous exudation of the brain, which is kept in a state of irritation by the contact of the extravasated blood. A false membrane is soon formed, and this new organ becomes the special agent of cure. The discovery of the spontaneous cure of bloody extravasations in the brain is of no small importance to the practitioner. Although the treatment has not been very materially benefited, the principal object is to combat or destroy the cerebral irritation in its embryo, before it has time to acquire such intensity, as will give rise to a softening (*mollities*) of the brain, or to the apoplectic extravasation.

The influence of pathological anatomy on the diagnosis and treatment of mania is not very remarkable; the detailed accounts of the opening of bodies after every sort of mental derangement, are pretty insignificant, and lead to opposite and uninteresting results. It is in vain that the dissector has sought for the nature of epilepsy, hypochondriasis, and tetanus. There seems to be a better prospect for hydrophobia. M. Trollet has observed in the bodies of persons dead of hydrophobia an inflammation of the brain, and of the mucous surfaces of the aerial passages, extending from the ramifications of the bronchiæ to the pharynx; the inflamed parts are found covered with a frothy serosity. These details are insignificant in therapeutics.

It is probable that dropsy will not form a distinct class of essential fevers in future nosographies; hydrocephalus will rank among the cerebral irritations; hydrophobia, among the diseases resulting from an obstacle to the circulation, from aneurysms of the heart or aorta, and from thoracic inflammations. Ascites will also be referred to abdominal inflammations and irritations; the great quantity of serum does not constitute the whole disease, as some have thought, though erroneously, because they give to the product of the irritation

the importance which exclusively belongs to the irritation itself. Dropsy, being most generally symptomatic, is, for the most part, consequent upon chronic indurations, and organic diseases of the viscera contained in the large cavities; but are they constantly the result of these slow inflammations? Is it not likely that the collection of serum and the alteration of the organic tissue occur from the same cause? These are questions of vital importance, which pathological anatomy has hitherto failed to settle. Cysts have a great analogy with the serous membranes; like them, they are sacs without openings, of a pale white, adhering by one of their surfaces, and composed of only one lamina. Hydatids are most generally found in the large fibrous cysts of the liver, where they give rise, according to their number and volume, to more or less serious accidents. Numerous researches have been made for distinguishing by certain signs the hydatids of serous cysts, but without success.

Encysted dropsy may take place in any one of the great splanchnical cavities, but always in consequence of irritation, and its development occurs in the same manner as all false membranes are organized.

The researches on serous productions made by men who cultivate pathological anatomy with advantage, seem to demonstrate that they are at first a secreted liquid which becomes organized, and subsequently a secreting organ. Let one of the fluids escape out of its natural vessels, let a new matter be formed under a tissue, the irritation resulting from it gives rise to a serous exudation; this serum becomes organized, and forms a cyst which nature employs, first for the purpose of isolating the extraneous substance, and afterwards for destroying it. We are indebted to pathological anatomy for the knowledge of this admirable phenomenon; it has taught us how, the exhalation predominating over absorption in the cysts, these sacs become filled with serosities which, by their gradual accumulation, progressively increase the dimensions of their parietes. Vide dropsy of the ovaria.

Much labor has been bestowed with the view to determine the nature of hydrocephalus internus, or dropsy of the ventricles of the brain; yet we know nothing positive on this subject.

Every one is acquainted with the pneumo-thorax of Laennec; and it would, therefore, be useless to dwell at length on this matter. Mediate auscultation and percussion are here very beneficial; those who have already made a trial of this new means of investigation, must be satisfied of its

advantages, and those who have not, will be much benefited by it.

The opening of dead bodies has thrown but little light on hemorrhage; this disease was long classed among those called vital. But can we conceive life independently of the organs, or is it susceptible of anomalies foreign to the tissues it animates?

Laennec has enriched what he has said of pulmonary apoplexy with precious details of pathological anatomy. He thought that, in slight hemoptysis, there existed a disorder in the vital properties of the mucous membrane of the bronchiæ, an anomaly in virtue of which that membrane secretes blood; but he conceived that there is something more in violent and copious hemoptysis; the cause of this sort of hemorrhage, at first, necessarily produces an irritation, an engorgement, a hardening, always partial and limited, of the lungs. This engorged part is quite circumscribed; its color is a deep brown red; when cut through, it looks granulated, but differs materially from hepatization; its aspect is homogeneous. This lesion, says Laennec, is evidently the result of a sanguineous exhalation in the parenchyma of the lungs themselves; the exhaled blood becomes coagulated in the aerial cells, and identifies itself, as it were, with the pulmonary tissue.

We shall next examine the influence of pathological anatomy on the diagnosis and treatment of phlegmasiæ. The great majority of diseases depend on irritations. This principle is explained by physiology. In the state of health, a continual excitement supports the organic actions, and its agents are of two kinds; the one stimulate the organs, but add nothing to the mass of the materials of which they are composed; the other, also, stimulate them, but, at the same time, repair by nutrition the continual losses the body undergoes. Hence we acquire the idea of the disposition of all the tissues to over excitement. There is, however, a cause more frequent, more energetic, and more general, of the irritation of our organs; this is the exercise itself of their functions which is kept up by particular stimulants, and the combination with that exercise of external stimulating causes.

Under the influence of the various general and local causes of excitement, the nervous ramifications, which form part of the elements of our organs, are modified, irritated; (for the nerves are always the primary seats of disease;) the stimulation is secondarily carried to the capillaries, which are blended and confounded with the other organic elements.

The fluids are drawn to the part where the irritating object is located; pain supervenes; the functions of the organ are disturbed, without their texture being, as yet, altered. To these local effects are added the general lesions of the nervous system, which has been primitively affected; the sanguiferous system, though but secondarily invaded, is the ordinary seat of irritation. The affection of the lymphatics, for the most part, follows that of the bloodvessels and of the nervous ramifications, in consequence of the unrelenting activity of the irritation; the organic texture is altered, and the disorder of the functions makes rapid progress.

This disorder, carried to a very high degree, may produce death before there exists a real phlegmasia in the diseased part. M. Begin, hitherto the most faithful interpreter of the doctrine of M. Broussais, has demonstrated that death is brought on, not by the local affection, but by the general disorder which the irritation has sympathetically determined.

M. Cruvellier has given very valuable details of pathological anatomy relative to the cicatrization of wounds and ulcers, the organization of fistulæ, the formation of callus, the cure of contusions, all of great practical utility. How does the reunion of the two edges of a wound in the soft parts take place? How is the continuity of tissue restored, where there has been a loss of substance? The lips of the wound are seized with inflammation; the place becomes painful; the inflammation extends more or less to the surrounding parts, and gives rise to an exudation of some consistence, which becomes organized and is transformed into a false membrane, and proves the agent of reunion. If there be a loss of substance, the new tissue organizes itself from the circumference to the centre, and covers the vascular carunculæ of the wound. If the wound be in contact with the external air, whatever be the wounded tissue, the circatrix is invariably the same; it is always a tissue analogous to the skin. But if the solution of continuity be internal, the agent of reunion is always a tissue analogous to the divided bone, cartilage, tendon, or muscle. The process of cure of an ulcer is the same as that of a wound in suppuration.

We are indebted to pathological anatomy for the knowledge of the true theory of the formation of callus, a theory important to be known, although it is nearly useless with respect to the diagnosis and treatment of fractures. The union of the two fragments of a fracture is the effect of various agents. Blood is thrown out by the ruptured vessels, extravasated and coagulated between the two fragments; a particular viscous fluid is secreted between the periosteum and

the bone, and comes also from the neighboring soft parts and from the surface of the solution of continuity; this fluid becomes more copious and consistent, and it confounds itself with the neighboring parts, forming between the fragments, the periosteum, and bone, a red tissue, and increasing its density. The periosteum is inflamed, enlarged, and totally blended with the neighboring irritated parts, which also assume the appearance of the red substance lying between the fragments; the medullary cavity is rendered narrower by a sort of cartilage, afterwards by an osseous tissue connected with the red substance. The callus successively becomes fibrous, fibro-cartilaginous, cartilaginous, and, lastly, osseous; and the periosteum, the soft parts, and the medullary canal, slowly resume their natural state.

The diagnosis of cancerous diseases has not been much benefited by the discovery of the scirrhus and cerebriform matters. It is always very difficult to pronounce with accuracy upon the nature of an engorgement, with pain of the mammary glands, when the degenerescence has not yet made considerable progress; and the uncertainty is still further increased when the stomach, the uterus, or the lungs are affected.

There exists an organic alteration, which we ought to mention in this place; it is melanosis, a variety of cancer. MM. Dupuytren and Laennec have contended for the credit of the discovery. We know the different sorts of melanosis, and it has been found in almost all the tissues. Examined at the different periods of its development, it has left no trace of the existence of vessels, fibres, and cellular filaments; and it appears to be the result of a secretion rather than of the decomposition or degenerescence of a tissue. M. Breschet presumes that melanosis proceeds from vitiated blood, and is the result of a morbid secretion. This opinion is corroborated by the chemical analysis made of it.

Is the tubercular, scrofulous degeneracy the consequence of irritation? Those tubercles are composed of an opaque matter, of a pale yellow, sufficiently consistent, analogous to concrete albumen, which afterwards becomes soft, caseiform, pultaceous, and puriform. They are either encysted or not; their shape is spheroidal, but irregular; they often occur in the lungs, the cellular tissue of the neck, groin, armpits, and mesentery; in the lymphatic bodies, the mucous membranes, the liver, in a word, in almost all our organs. They spontaneously throw out their contents, and constitute ulcerated cavities, the parietes of which are formed out of the tissue of the organ itself, or of a smooth, red, and very thin membrane.

Pathological anatomy was alone capable of showing that the phlegmasia of the brain, and that of its membranes, are different diseases; that, in certain cases, the brain is the seat of inflammation, while every one of its membranes is sound; that there are others where the phlegmasia is confined to the arachnoides. In frenzy the arachnoides is red, but this color is not uniformly extended; brown, blackish spots are spread over various points of it; it is sometimes covered with numberless tubercles or granulations, and often considerably thickened. The cranium of frenitic patients has several times been found to contain a serous, purulent liquid, ulcers, hydatids, steatomatous and scirrhus tumors, false membranes, and cysts.

How perfect must not be the tact of the physician who is able to delineate, at the bedside of the patient, disease of the arachnoides, either cerebral or spinal, meningitis, and cephalitis. M. Lallemand has discovered a very precious sign for the diagnosis; there is no delirium when the inflammation of the brain is from complication; this symptom belongs especially to arachnoiditis. The arachnoides, when inflamed, irritates the brain by its contact with it.

There is no uncertainty respecting the seat of pleurisy. This phlegmasia is followed by several sorts of organic lesions, the most remarkable of which is adhesion. In a state of inflammation, the serous membrane exhales at its internal surface a somewhat concrete matter, semitransparent or opaque, of a more or less yellowish white, of a consistence which may equal that of the buffy coat of the blood, and of the thickness of half a line to two lines. Adhesions have a useful tendency; they are an obstacle to extravasations of pus in the cavity of the pleura; but sometimes they impede the free and regular exercise of respiration.

The diagnosis of the phlegmasia of the pleura pulmonalis is much indebted to pathological anatomy. This science has taught that the thoracic viscera may be alone inflamed, and efforts have been made to determine the characters peculiar to each of them; the existence, the seat, the quantity, more or less great, of the sero-purulent extravasation, can be ascertained during life. The difficulty of breathing, and the lacerating pain that sometimes remains after a pleurisy which has been cured, are explained by the knowledge acquired of the false membranes and the adhesions of the pleura to the parietes of the chest, or to the lungs. Now that we know that all phlegmasiæ of the parenchyma, or the cellular substance next to the pleura, cause the inflammation and adhesion of the parietes of that membrane, there will be no

longer any fear of purulent extravasations in the cavity of the chest, in consequence of abscess in the lungs or the cellular tissue external to the pleura costalis. There are two powerful means of identifying with precision the alterations of tissue subsequent to pleuritis; these are percussion and mediate auscultation. Both are useful only to those who possess an intimate knowledge of the pathological anatomy of the diseases of the chest; yet whatever therapeutics may have gained is by no means to be compared to the immense progress made in the diagnosis of those diseases.

Great care has been taken in describing the organic lesions consequent upon inflammation of the pericardium, the redness of its serous membrane, its granulations, the white spots sometimes found upon it, its adhesions, its false membrane, the extravasations in its cavity, and yet it is now, as it was before the knowledge of these phenomena of pathological anatomy, extremely difficult to ascertain their existence during life, and not one of them is yet known to be accompanied with a pathognomonic symptom that would positively indicate the existence of that phlegmasia; there is no positive means to distinguish it from the organic lesions of the heart, that often coincide with it, and the phlegmasiæ of the lungs and pleura, along with which it also frequently exists. The openings of bodies have shown the existence, in many individuals, of an intimate adherence of the pericardium with the heart.

Peritonitis has been discovered by Johnson, Walter, Laennec, and Corvizart. Previous to the researches of those physicians, what absurd theories had we not, and what numerous dangerous consequences deduced from them, on the subject of what was called the puerperal fever of lying-in women? It is now well established that the peritoneum may be alone inflamed; that its inflammation has a perfect analogy with that of the pleura: we no longer call it an effusion of milk.

A new organic lesion has just been discovered by pathological anatomy; it is the softening of the brain; it has been discovered by Abercrombie, Lallemand, and Rostan. It is not an essential disease, but an alteration of tissue consequent upon inflammation.

Pulmonary catarrh is an inflammation of the glands and cryptæ of the mucous membrane of the aerial tube. M. Laennec considers the rattling noise as one of the principal signs of the pulmonary catarrh. If the stethoscope be applied to the chest at the commencement of the disease, a rattling noise is heard which is often very loud, generally

sonorous, sometimes tremulous, and indicating, by its tremor, the point in the lungs from which it comes. M. Laennec has been inclined to think, from the facts he has observed, that the rattling is the more grave and sonorous as the serosity is less copiously secreted, and the internal coat of the larger trunks of the bronchiæ more tumefied.

The dilatation of the bronchiæ, affecting but a small portion of their ramifications, may exist in all parts of the lungs, but more commonly in the superior lobe. If but one or two bronchial ramifications are affected, the symptoms are an habitual, generally rare, and slight cough; but if the disease is extensive, the intermediate parenchyma of the lungs is flaccid, deprived of air, evidently compressed, and exactly in the same state as when the viscus is pushed to one side, by an extravasation in the chest; then the dilatation of the lungs brings on a chronic catarrh, which remains for life.

The real ulcers, without tubercles of the lungs, are extremely scarce; the application of the stethoscope to the anterior and lateral parietes of the chest indicates the exact seat and extent of excavations within its cavity. When the patient is made to speak while the cylinder is applied, and the ear of the physician adapted to its extremity, the voice seems to come directly from the chest, and pass entirely through the centre of the instrument. Another phenomenon different from this is, that when a cylinder is applied, and the patient made to speak, his voice, which is, as it were, argentine, produces an illusion such that some one appears as if speaking in the chest of the patient; it is trembling and jerking, like that of a goat; this phenomenon exists only in those affected with acute or chronic pleurisy, with some extravasation in the pleura.

The history of the lesions of tissue, consequent upon phlegmasiæ of the thoracic organs, is the most brilliant page of pathological anatomy; it has determined their nature and seat, and pointed out their symptoms with great precision, some of which could never have been discovered without it. Before the cultivation of that science, pleurisy and pneumonia were alone perfectly understood, though their history was by no means complete. The diseases of the pectoral organs are very numerous and violent; their symptoms are almost alike; dyspnœa, cough, and expectoration are to be observed in most of them; very little information can be had from the exploration of the pulse; the percussion of the chest, after the method of Avenbrugger, is much more to be depended on; it has greatly improved the diagnosis of those

diseases; and Laennec considers it one of the most important discoveries that has ever been made in medicine.

With the precise nature and seat of the majority of diseases, clinical observations cannot make us acquainted. It lends its aid to every system; the same facts are the support of every opinion, and nothing can be more variable than symptoms. Widely different are the positive and unchanging objects of pathological anatomy. It bends the attention to the distinct lesions of the tissues; it offers infinitely greater certainty than symptomatic nosology; it describes better and with much greater precision. Few words are necessary to characterize asthma, emphysema of the lungs, and phthisis, while the same pathological affections, studied after the manner of Sauvages, fill many volumes. Is it not an immense advantage to be freed from those long and tedious digressions, upon the proximate causes of diseases, which delighted our ancestors—those vain theories, which succeed each other, as on the surface of the troubled ocean the wave which approaches follows that which has passed—those hypotheses, infected with the errors of the times that produced them, of which was composed nearly the whole of medical science? Will not pathological anatomy preserve medicine, for ever, from a return to the ages of ignorance and barbarism? And, now, is it not infinitely preferable to study melanosis, the encephaloides, and the transformations of the tissues, for the diagnosis and the treatment of diseases, than to consume our time and fatigue our judgment with fruitless meditations upon the vital principle—the force of vital resistance—the force of permanent situation—animal and organic, sensible and insensible, contractility, and so many other scientific and unintelligible follies? Pathological anatomy treats of physical alterations. It is occupied exclusively with the materiality of diseases; it describes all the lesions of position, form, volume, and texture—of density, color, and the relations of which the different parts of the animal economy are susceptible. By its means, physicians have been able to classify a great number of diseases—to distinguish their orders, their genera, and their various species. Without it, it is impossible to fix the seat and ascertain the precise character of the disturbance of the functions existing in an organic lesion. The time of abstractions and chimeras is passed, and the reign of facts and certainty is come. Thanks to pathological anatomy, we observe better and explain less; physicians have more circumspection, more criticism, and more method. The most important service that it has rendered to the cause of medicine is the furnishing a new means of

bringing together those diseases which are of the same nature, and of separating those which, notwithstanding the similarity of their symptoms, are of a nature really and widely different. We now know that the identity of an organic lesion establishes an identity of nature between species of the same genus, and, setting out with this principle, we regard, as belonging to diseases of the same order, those lesions which present the same mode of organic alteration, whatever may be their seat and the diversity of their symptoms. Thus pathological anatomy has given their true character to the cancerous, inflammatory, and tuberculous affections which, having their seat in all the organs, with symptoms widely different, show lesions of the tissues and degenerations, always and everywhere the same.

Without pathological anatomy, how would it have been known that phlegmasiæ of the membranes and of the parenchymata, having become chronic, betray symptoms of a particular form? That in arachnoiditis, the symptoms of phlegmasia differ as a particular portion of the serous membrane is inflamed? Without it, how could we have learned the manner in which nature cures the effusions of blood in the brain and tubercles in the lungs? How insufficient and delusive is clinical observation, when we seek to establish the diagnosis of the greater part of the diseases of the organs enclosed in the splanchnic cavities? Asthma is exhibited there, as an organic lesion of the heart. Are you called to see a nervous ataxic fever—the arachnoides is inflamed; a spasmodic affection of the stomach—the pylorus is disorganized by a scirrhus. Deceived by clinical observation, physicians often take the effects of the complications for their causes, and sympathetic phenomena for the essential affection. M. Laennec affirms that pathological anatomy is indisputably the most certain means to guide the physician as well to the knowledge of diseases as to the means of curing those which are susceptible of cure.

These are the claims of pathological anatomy. Let us now see what its adversaries say of it.

Diseases consist in a disorder—a disturbance of the functions, which necessarily supposes a primitive alteration in the natural state of the organs. This alteration has always its seat originally in the nervous system, whatever may be its terminations. There are diseases whose character appears to be an affection of the nervous power; there are others, which degenerate into lesions of the tissues. The latter leave upon dead bodies unchanging and distinct traces of their existence. The former cause death without leaving any vestige or any

sensible mark by which to know them. What are the anatomical characters of tetanus, of mental alienation, of hypochondria, of epilepsy, and of so many other neuroses? Can the alterations of tissue, (so unlike in their nature,) which they sometimes leave in one or another viscus, explain the symptoms by which they are manifested? A spasm of the heart, the brain, the lungs, may cause instant death; but when such has been their result, where is the evidence of their existence? Do not the yellow fever, the typhus, and gastro-enteritis destroy life and leave untouched the texture of all the organs? Do not the causes of death act with astonishing activity upon the nervous power exclusively? There are, then, diseases which produce no material organic lesions; pathological anatomy, therefore, cannot be the basis upon which can be established the whole of the medical science.

The endeavor to establish a classification of diseases upon pathological anatomy has been unsuccessful. It is without cause, that some physicians, after having upon great probabilities suppressed the whole class of essential fevers, seek to make conquests from the neuroses for the benefit of the phlegmasiæ.

In a great variety of circumstances the alterations which an organ exhibits after death in no wise explain the morbid phenomena observed during life, and in such cases the sympathies alone can tell us the cause of death. And the various lesions that the viscera exhibit—the evident traces of inflammation upon the mucous membranes, consequent upon ataxic and adynamic fevers, are they the cause, or the effect, or complications of these diseases? Can pathological anatomy solve the problem? Does it not increase the difficulties of the solution? How many individuals die of a diseased brain, after having had the lungs originally affected? Does it not sometimes happen that a collection of blood—a mortal effusion in an organ, originates at a very remote point? and in that case, does not autopsy lead into error by exhibiting the effusion, the collection, and the phlegmasia as the essential disease? Is not the arachnoides in the basis of the brain, soon after its attack, sometimes accompanied with a gastritis, whose extreme violence conceals from the eyes of the physician the point where the disease originated?

Pathological anatomy makes us acquainted with physical lesions alone; it confines our attention to them; it makes us almost forget what they have originally been; it almost always leaves us in great uncertainty, and often in total ignorance, of the manner in which those degenerations are born and formed. Bayle says, (and he wisely appreciates patho-

logical anatomy,) that the opening of corpses can only instruct us in the effects of diseases, and in their occasional causes; it can never assist us in discovering the vital lesions which constitute their essence. Pathological anatomy has, however, had great influence upon the progress of medicine in general, in giving to it more precision, in rendering it more positive, and in elevating it, in many respects, to the rank of the exact sciences. A great number of internal diseases were little known; it has thrown light upon their diagnosis. By it many very common organic lesions have been discovered. Clinical observation, important of itself, has become more methodical, and has made infinite progress. Its influence, however, upon therapeutics has not been as great or as happy as might have been hoped. We cannot have invariable principles of pathology. Our ideas of the nature of diseases cannot remain the same so long as time in its rapid course is continually removing things and men. There are no physicians who have not lost much in remaining stationary, in the midst of the discoveries which mark the succession of ages. There is none, whose opinions during his short career have not been subject to changes without limit, by which, at times, more or less remote, they have been almost wholly renewed. Thus our tissues, destined to wonderful metamorphoses—continually receiving new elements and continually wasting by losses, are many times, during the short course of our existence, entirely changed in their composition. Theories are every day discovered, and every day, by consequence, must theories be essentially modified. Some physicians see prevailing, at the decline of life, the doctrines and opinions which obtained in their earlier years. Science does not stop its progress; it advances, and, to follow it, continual efforts are necessary. We sometimes seem to have accomplished our purpose, and to be able, at last, to taste the charms of repose; but a new truth has been pointed out, and we are compelled to new toils. The rock of Sisyphus has again descended. To forget and to learn—to learn and to forget, is the destiny of the physician.*

* For many of the facts adduced in this paper, I am indebted to the work of M. Ladeveze.

ART. XI. *Case of Recovery from Poisoning by a Large Dose of Arsenic.* By HENRY G. DUNNEL, M. D., of New York.

FEBRUARY 1st, 1827, at 4 P. M., I was called to visit Isaac Matthews, æt. 30, a robust and athletic man, of intemperate habits. I found him in strong convulsions; face and eyes very red; pulse full, quick, and hard. He had been observed to take a table spoonful of a white powder, at three several times; the first, about half past 2 o'clock, and the last, twenty minutes previous to my visit. The powder had the appearance of arsenic.

I had always supposed, from the toxicological synopsis of poisons, that nausea and vomiting were among the first symptoms of this poison, and was, therefore, somewhat surprised to learn no such effect had occurred.

The jaws were pried apart sufficiently to admit a solution of ℥ss. sulph. zinci., which not having the desired effect in ten minutes, ℥i. more was given, which soon evacuated the stomach. The emesis was encouraged by large and often repeated draughts of sugared water and milk.

6 P. M. Sensible; complains of a constriction of the upper parts of the larynx, as if from a tightly drawn cord. The least movement of the head, to either side, produces an appalling sense of instant suffocation; darting and pungent pains of the eyeballs. Conjunctiva very florid; tormenting gripings about the umbilicus; abdomen distended enormously; occasional vomiting; pulse very weak and feeble, scarcely to be felt; and every few minutes convulsions supervene. The only effect the patient experienced from the arsenic previously, was a giddiness, as if intoxicated. A large enema to be administered, continue the drinks, and rice water to be taken freely.

11 P. M. The enema had procured large evacuations of very black and offensive fæces. Abdominal distension lessened; great tenderness of the bowels, even the weight of the bed clothes insupportable; a constant shivering, and cutis anserina; pulse continues the same; no convulsions have occurred for some time past; vomits his drinks. Enemata to be continued. ℞. ricini. ℥iiss. in mint water to be given immediately.

2d. Has passed a very restless night; the oil had been retained; pulse full and soft; skin warm and moist; pains general throughout the body; but at the epigastrium the touch is agonizing. Hiccup is present occasionally. The pain of the head and eyes, constriction of the fauces, and sense of

suffocation are unabated; shiverings more intense, although he complains of feeling an ardent heat over the whole body; has vomited all night; the convulsions have ceased. The whole of the abdomen to be covered with an epispastic. The enema to be repeated, and the drinks of sugared water, rice water, and flaxseed continued.

2 P. M. I visited him in company with Dr. B. Bailey; found his pulse, soft, full, and slow; syncope occurs frequently; and there is no abatement of the pains. The enemata failed to evacuate the bowels, which continue distended; there is slight trembling and delirium. It was determined to give the following: ol. ricin., tinct. senna comp., aa. ℥ij. aqua menth piper. ℥iss.; of which a table spoonful to be taken every half hour, until free evacuations occur.

11 P. M. Somewhat relieved. The medicine was retained, and produced copious black stools; abdominal distension greatly lessened; a salivation has come on; and the constriction of the throat abates. A strangury and bloody urine having occurred, he is to have ℥i. spts. nit. dulcis every hour, and take the cathartic dose every two hours.

4th. All the symptoms abated; spitting continues; great distress was occasioned today from drinking half a pint of pure milk. Cathartic to be continued.

5th. Was relieved by the purge yesterday, but today the same symptoms arose from a small cup of chicken soup. A paralysis of the lower limbs has occurred; the patient moves them quite well in bed, but is unable to bear the least weight upon them, or to move forward, unless by the aid of his hands. The mixture to be continued, and no drinks allowed, except rice or sugar and water.

6th. The patient is sitting up, but unable to walk; feels much relieved; a slight tenderness of the epigastrium remains. The spitting of a thick viscid mucus continued for a few days after this date, and the paralysis obliged him to use crutches nearly a month.

The remainder of the powder was submitted to a chemical analysis, and proved to be good white oxyd of arsenic.*

* The following processes were used :

To a solution obtained by boiling a few grains in distilled water, a small quantity of a weak solution of carbonate of potass was added; upon the addition of a few drops of a solution of sulphate of copper, a yellow green precipitate ensued.

To a quantity of boiled starch was added a few grains of iodine, which produced an azure blue; upon adding a small quantity of the solution of the powder, the color was destroyed; upon the addition, however, of a few drops of sulphuric acid, the color was restored.

One drachm was treated with black flux; a metal was reduced, having

The quantity taken was at least an ounce and a half; and the first table spoonful had remained upwards of an hour upon the stomach. This account was corroborated by his wife and mother, who were present at the time, but suspected nothing, as he assured them it was cream of tartar he had obtained for the purpose of curing an eruption.

This eruption of his skin had its rise in this manner: about nine months before, he had a chancre on the glans penis, which, black wash and caustic failing to cure, a buboe in the groin, proceeding fast to suppuration, induced him to undergo a mercurial course, until salivation occurred, when the chancre and buboe healed kindly. No other symptoms appeared until about two months previous to his attempt at suicide. Venereal eruptions, with the peculiar copper colored scabs, attended with foul ulcers, pervaded his extremities. He had taken no medicine for their cure, and they continued unabated, until he was able to move round on his crutches, when the scabs began to fall, the ulcers dried, and the skin became clear, before he had recovered a perfect use of his limbs. No more venereal symptoms made their appearance up to the time of his death, which happened (from smallpox) in March, 1828.

From this case, it would seem, that a large quantity of arsenic may remain upon the stomach some time without causing death; and in this subject it proved of essential service, freeing him from secondary syphilis, for which, I have no doubt, a mercurial course would have been the only cure, had not the arsenic been taken. How far it might be justifiable to carry the use of arsenic, circumstances attending each case would alone determine. But from the effect on this man, and what I have seen given in various cases of obstinate diseases of the skin, I am induced to believe large quantities may be taken without producing bad effects. That it is one of the best remedies we possess in the cure of many of the cutanei is well known; and I shall feel inclined to put its ability of curing secondary syphilis to the test at the first convenient opportunity.

the appearance of polished steel, easily pulverized in a mortar, and burnt, upon being thrown on a red hot shovel, with a blue flame, attended with a strong odor of garlic.

A few minutes after the emetic first operated, a cat, belonging to the family, lapped of the evacuations from the stomach, which had been left in a basin. It was observed soon after to sicken, and to die of convulsions within an hour.

ART. XII. *Case of Anomalous Affection of the Kidneys.*

By R. K. HOFFMAN, M. D., of New York.

LIEUTENANT E., of the U. S. ship Ontario, arrived at Naples in August, 1816. He was in the prime of life, and possessed a strong constitution, unimpaired by previous disease. His appearance, during the preceding six months, had been unusually healthful. On the voyage from Gibraltar, he was admitted on the sick list for pains in the lumbar region, which ceased after the exhibition of a saline cathartic, the use of a pediluvium, and tepid drinks at bed time, and he resumed his duty. He had remarked to me, with a degree of indifference, that he was subject at times to acute pains in the groins, and had recently been observed to catch his breath and compress his sides for transient pain about the stomach. They attracted but momentary notice, and were scarcely regarded by the patient himself. He passed the 21st and 22d in the usual recreations on shore; and visited, among other interesting places in the vicinity of Naples, the Grotto del Cani. He stooped down to inspire the carbonic acid gas which this grotto disengages; and, on rising, was affected with nausea and pain in the stomach, from which he soon recovered. On the 23d, he remained on board in command of the ship, and in good health in the morning. On my return from the city, about ten at night, he complained of feeling deadly sick—nausea and vomiting, with severe paroxysms of pain about the navel, had succeeded to a chill; the fauces were inflamed; bowels costive; skin hot and dry; he felt great prostration of strength, while the pulse, by its strength and fulness, indicated unusual excitement. His symptoms were ascribed to a check of perspiration—the confined state of his bowels, repletion, and the unaccustomed exercise of the preceding days. He was bled to $\frac{3}{4}$ xvj. from the arm, and a dose of fifteen grains of calomel with one of opium was administered; his feet were bathed in warm water, and fomentations applied to the belly. He passed a very restless night, with severe vomitings; and had two small discharges per anum. On the 24th, his countenance was visibly changed for the worse; he labored under constant anxiety and fretfulness; the excitement of the pulse was reduced; the throat relieved; but nausea and vomiting, with pain like that of colic, frequently occurred, and was increased by pressure on the abdomen. We thought further evacuations from the bowels to be indicated, and gave repeated doses of castor oil, endeavoring, at the same time,

to counteract the inverted action of the stomach by the common evacuations. These produced moderate evacuations. The skin was cold and dry.

On the third day, there was but little change in the symptoms. The nausea was less; but the gastric irritability so great, that all he swallowed was immediately ejected from the stomach, together with dark colored bile. The patient dozed in the intervals of vomiting, but had no sound sleep; his skin remained dry and cold to the touch. With the view of determining the blood to the surface, and of clearing the stomach and duodenum of their supposed offensive contents, a scruple of ipecacuanha was given, and its operation proved very distressing to the patient. His posture in bed was on his back, with the shoulders and head raised and supported by pillows, and he was observed to keep his feet elevated against his cot; thus relaxing the abdominal muscles. The tongue was coated yellow; the urine was scanty, and high colored. Three grains of calomel were directed to be taken every four hours, and a large blister was applied to the abdomen; his drink consisted of toast water.

Fourth day; had dozed much, with frequent starts and cries from pain during the night. The surface, generally, remained cold and dry, appearing to be deserted by the blood. No tension was perceptible which, in force and frequency, was below the natural standard; and, with the exception of a burning sensation in the region of the stomach, there was no change in the patient's feelings. Flushing of the face, which had appeared at times from the commencement of the attack, now became more constant; and the disposition to coma increased. Venesection to the extent 3xx. was repeated, and a tendency to deliquium induced; copious discharges from the bowels succeeded; but the inverted action of the stomach was renewed with undiminished frequency, and the matter ejected presented the appearance of coffee grounds. The blood, on coagulating, showed the buffy coat, but no sensible relief of the pain was observed from its abstraction. The quantity of calomel was reduced to two grains three times a day; the blister dressed with mercurial ointment.

During the fifth and sixth days of the disease, flushed face, constant headache, cold and dry skin, dozing and sudden starts, vomiting and free discharges per anum, combined. The citrate of potass, with the addition of tinct. opii, was given in a state of effervescence, and immediately rejected. The patient complained of pain only in the act of vomiting. The apparent indication of obtaining free evacuations from

the intestines being fulfilled, we expected the inverted action of the stomach to cease, and ascribed its continuance to the state of the surface. The warm bath, diaphoretic and anodyne medicines, were resorted to without effect. The skin remained cold and husky. The use of calomel was continued, combined with pulv. ipecac. comp., on the sixth; and he rested with less disturbance during the night.

On the seventh day, the face continued flushed, and the discharges per anum copious and foetid. He had eaten some water melon, oranges, and peaches, for which he had, at times, expressed a wish. He still preserved the fixed posture of the body in bed, and required assistance in changing the posture of his legs. In the afternoon, the patient complained and fretted much; had four stools, and vomited large quantities of dark colored matter. In the evening, the warm bath having been used without exciting the circulation in the skin, he became delirious, and used incoherent expressions; the face appeared more flushed; no increased action was perceivable in the carotid arteries. In passing my hand over the abdomen, a large tumor was felt strongly pulsating below the umbilicus, like an aneurism of the aorta. The symptoms of oppression of the brain, indicated by flushed face and delirium, induced me to try the effect of another bloodletting. About ζ xii. of blood were drawn from the arm; it appeared not to affect the pulse, but the patient sighed heavily during its flow, and the arm was bound up. A few moments after, he asked to be raised higher in bed; and in changing the pillows, his shoulders and head were suffered to fall lower than before, when he suddenly expired.

The contents of the abdomen were examined a few hours after death. No traces of disease were visible in the peritoneum, nor in any of the chylopoietic viscera; a hard and irregular tumor was felt posterior to the intestines, these were separated from the mesentery and laid aside. On raising the mesentery, which covered and confined this morbid enlargement, it was found to exist in the kidneys. Each was of thrice their usual size, united at their lower extremities, and constituting one body, which stretched across the spine, compressing the vena cava and aorta, just above the division into the iliac arteries.

The most prominent symptoms in this case of nephritis idiopathica, were morbid sensibility and irritability of stomach, pain in the umbilical region, flushed face, coma, and cold and dry skin. The facility with which evacuations were obtained from the bowels, distinguished the disease from enteritis—the absence of pain in the region of the kid-

neys, and of frequent micturition, together with the anomalous symptoms of the case, led to an incorrect diagnosis; and, consequently, to a defective plan of treatment.

In relation to the physiology of the kidneys, they are known to be subject to a good deal of variety in their natural appearance from their original formation; and that little or no disadvantage to the animal functions is produced by this variety. The subject of this case of congenital malformation of the kidneys, was especially liable to slight attacks of pain in the loins, but experienced no serious inconvenience from this cause, until the supervention of inflammation which terminated in his death.

ART. XIII. *An Anomalous Case of Enlarged Spleen.* By
A. W. GATES, M. D., of Yonkers, N. Y.

J. SMITH, of Yonkers, Westchester county, N. Y., aged 49, who has been afflicted with disease for the last thirty years, was attacked, in 1825, with an enlargement of the spleen, which increased rapidly, and in the space of three months produced the most alarming and distressing symptoms, such as great dyspnœa, irregularity of the circulation, anorexia, peristaltic motion of the intestines obstructed; during this and the subsequent stage he has been actively treated by mercurials internally and externally. A seton, mild cathartics, and other remedies, were employed, which only produced the effect of checking the growth of the tumor and relieving the symptoms temporarily. From this period until December, 1828, his case remained the same; the urgent symptoms were alleviated as they presented themselves; at this time his disease became aggravated, the tumor enlarged; a dropsical effusion commenced in the abdomen, which was complicated with all the usual symptoms of calculi, several of which were discharged through the urethra at different periods; the derangement of the stomach and bowels was much increased; the liver was also very much deranged; all these unpleasant symptoms continued increasing until the 25th of August, 1829, when he died.

Eighteen hours after death, I proceeded to the examination, assisted by Mr. P. Melvin Cohen, of Charleston, in the presence of the Rev. Mr. Crosby, S. Simson, Esq., and several other gentlemen. The lungs were closely adherent to the sides of the thorax, and were more extensively diseased than was expected from the previous symptoms. The cavity

of the chest was much contracted, and the diaphragm thickened. On opening into the cavity of the abdomen, the spleen was found to be very much enlarged and thickened, occupying the epigastric, right and left hypochondriac, the umbilical, left, and a portion of the right lumbar, extending down into the hypogastric region; it was firmly adherent to the peritoneum and intestines throughout almost the whole extent; on dissecting it, several small spiculæ of bone were found imbedded in the substance of the organ; the largest was near the entrance of the vessels, and was one and a half inches long, three quarters of an inch wide, and of a triangular form. The spleen was of an irregular oblong shape, weighing six pounds and fourteen ounces; several small abscesses were found in its substance, the largest of which was one half inch in diameter; the remaining chylopoietic viscera were much displaced, occupying a narrow space on the right side.

The liver was sound and presented a healthy aspect; the gall bladder was full of bile. The stomach was small, contracted, and empty, which, together with the intestines, were so adherent and altered in structure as not to be separated. The left kidney was perfectly sound; the pelvis of the right kidney was much enlarged, and contained a wine glass full of calcareous substance of a variable density; the ureter was enlarged; the bladder was much contracted, containing a table spoonful of a substance similar to, though softer than, that found in the kidney.

This is a brief account of this singular case, which, being of an uncommon nature, I have deemed advisable to forward for publication.

ART. XIV. *Observations in Midwifery, on Presentations of the Shoulder.* By J. W. HEUSTIS, M. D., of Cahawba, Alabama.

IN the practice of midwifery there are, perhaps, few situations which present greater difficulty to the accoucheur, than those presentations of the arm and shoulder, in which the membranes having been long broken, the child remains fixed either at the superior aperture of, or in the cavity of, the pelvis, firmly embraced by the permanent contraction of the uterus. This is Dr. Denman's *third distinction* of his second order of preternatural labors. In this order he includes the presentation of the shoulder, or one or both arms; in relation to which his general precept is, that "whatsoever of

these (that is, either the arm or the shoulder) is the presenting part, there is a necessity of turning the child, and delivering by the feet, for the interest both of the mother and child!" yet, from his own representation, it is sufficiently manifest, that to accomplish this is an undertaking of peculiar difficulty, notwithstanding the free use of opiates and venesection in cases when these are admissible. This operation is very methodically laid down by Baudelocque, from whose representation it would appear to be quite simple and practicable, and that nothing more was required than to introduce the hand, remove the shoulder from the superior strait, and, conveying the fingers along the back and lower extremities of the child, to arrive at the feet and bring them down; but when the waters have been already many hours discharged, and the uterus has contracted firmly about the child, enveloping it like a tight bandage in every direction, to introduce the hand and change its position in any way, is what, perhaps, but few are sufficiently fortunate or skilful to accomplish. And if, on the other hand, we adopt the cautious advice of Dr. Denman, to wait with patience for the spontaneous evolution or turning of the child, our conduct might be compared to that of the simpleton who watched for the brook to flow by him, that he might pass over dry shod. I do not pretend to deny, however, that such spontaneous evolution never takes place; the respectable testimony of Dr. Denman and others is conclusive in establishing the fact; all that I question, is the propriety of the practice in trusting to nature an operation which she is seldom able to accomplish. It would seem that the French and English accoucheurs run into the opposite extremes; the former being too officious, mechanical, and instrumental; the latter relying too much upon the powers and resources of nature. It has been considered as a rule, that so long as the pains continue vigorous, and the strength of the patient is but little impaired, we should refrain from resorting to instruments for the purpose of mutilating the child, or lessening the head; and that this practice should never be resorted to, till, by observing the declining strength of the woman, we find that nature is unable to accomplish the delivery; and some even go so far as to recommend, in preference to resorting to the perforator and crotchet, that we should wait for incipient putrefaction to occasion a collapse of the fœtus, and diminish the resistance on the part of the mother. But few, I believe, would be found to sanction and adopt a practice so doubtful and dangerous to human life. In relation to this subject, Dr. Denman makes the following observations :

“But when we are called to a patient with a preternatural labor, in which there is little or no reason to hope for the preservation of the child, or in which we are assured of its death, or when the operation of turning cannot be performed without violence, and some danger to the mother, the knowledge of the probability of a spontaneous evolution will set our minds at ease, and disengage us from the consideration of making any hasty attempts to perform a hazardous operation, from which no possible good can be derived, except that of extracting a dead child, and which, at all events, might be effected by a method far more safe to the mother.”

Now, this more safe method to which Dr. Denman alludes, is that of spontaneous evolution. He is here speaking of presentations of the superior extremities; and, in the situation previously mentioned, to say that this state of expectancy and inaction is safer than the attempt of turning and delivering by the feet is, to a limited degree, unquestionably true; because when the fœtus has been many hours impacted in the pelvis, and firmly embraced by what may be called the spasmodic contraction of the uterus, to turn and deliver by the feet is impossible, at least, without using such violence as to endanger the laceration of the uterus, and its separation from the vagina; or such other serious injury to the mother, as no man of prudence would presume to hazard. It unfortunately happens, in cases of this description, that this difficult and dangerous situation is generally produced by the mismanagement, ignorance, and imprudence of the too officious midwife, who, finding something wrong and difficult in the delivery, endeavors to overcome resistance by force. The result is that the fœtus becomes immovably wedged and impacted in the pelvis: being ignorant of the necessity of remedying a wrong presentation immediately on the breaking of the membranes, by turning and delivering by the feet, the favorable opportunity is lost, and the death of the child is almost the inevitable consequence.

I will conclude this article by subjoining two cases in illustration of the subject:

CASE I. On the 22d of October, 1828, I was called to a negro woman in labor, belonging to Col. Chas. L. Mathews, of this vicinity. I had been previously sent for, but being at some distance, on a visit to another patient, another physician was sent for. I found, on my arrival, the late much respected and amiable Thomas Lesley, M. D. in attendance; but no progress had been made in the delivery. The woman had now been a considerable time in labor under the care of an old negress. The membranes had been long bro-

ken, and the child was immovably wedged about midway of the pelvis. It was an arm and shoulder presentation. The right hand had protruded, and the shoulder, neck, and the orbit of the eye of the same side, were all that could be felt. To introduce the hand and reach the feet was impracticable; nor could the shoulder be moved in any direction. After laboring ineffectually for more than an hour, it was determined to reduce the head, as the only practicable mode of effecting the delivery of the woman. The skull was accordingly perforated just above the right orbit, the only part of the head that was accessible, and the brain discharged. The bones collapsing suffered the head to be brought down, and the woman was then delivered. Although much violence had been used by the midwife previously to my seeing her, the woman recovered without any untoward symptoms, except that the nymphæ were considerably swollen and œdematous for a few days.

CASE II. On the 9th of April, 1829, I was requested to visit a black woman, about fifteen miles from this place, who was said to have been five days in labor. Several of the neighboring physicians had been applied to, but without success. A white woman midwife was in attendance. The woman herself was reduced to a state of great weakness and exhaustion; both the external and internal parts were excessively tender, from frequent and severe handling. The uterus was firmly contracted about the body of the child, which was dead and putrid; the gaseous evolutions of putrefaction escaping from time to time with a considerable crepitus. It was a left side and shoulder presentation; the hand and arm had protruded. No person, under these circumstances, would have thought of turning and extracting it by the feet. Without much difficulty I succeeded in separating the arm from the shoulder; but the body was still as immovably fixed as ever. The head was out of reach; I therefore perforated the upper part of the thorax, and fixing my hook upon the clavicle, broke and separated the fractured portion from the sternum; I next fixed the hook upon the first ribs, and, partly by twisting and partly by pulling, broke them, carefully removing the spiculæ as I proceeded. In this way I went on, till I had made a sufficient opening to enable me to extract the viscera of the thorax and abdomen. By this time the fœtus had descended into the lower part of the pelvis side foremost, so that having, at length, reduced it sufficiently in size, I was enabled to seize it and extract it with my fingers. The whole of this disagreeable operation took up rather more than an hour; and during the time, I

was frequently under the necessity of desisting, to allow my hands to recover from cramp and numbness produced by the firm contraction of the uterus about them. After giving directions for her treatment, which consisted in mild febrifuges, enemata, and warm fomentations to the abdomen, in case she should be afflicted with peritoneal inflammation, I left her with little expectation of her recovery. I afterwards, however, had the satisfaction to learn that she rapidly convalesced from the time of her delivery; and she now enjoys good health.

REVIEW.

ART. I. *Elements of Pathology and Practice of Physic.* By JOHN MACKINTOSH, M. D., Lecturer on the Practice of Physic in Edinburgh, &c. Vol. I., 8vo. pp. 484.

[Analysis continued from last volume, p. 346.]

ATTACHMENT to any exclusive theory, while it is productive of much indirect benefit to the cause of science, is, at the same time, attended by certain evils, which, in that of medicine, cannot be too much deprecated and avoided. It undoubtedly kindles a noble enthusiasm—awakens an untiring industry, and gathers up stores of knowledge, which might have else wasted on the desert air; but, on the other hand, it engenders too blind a credulity for whatever it can identify with its favorite doctrines, and an almost indiscriminate scepticism to every fact which threatens their stability, or varies with their predetermined proportions. Such have been its effects on every successive race of systematics, from Galen down to Broussais. Those who regard morbid anatomy as the only resting stone upon which the art of medicine can place her firm dependence, must necessarily overlook much that occurs before death, disregarding not only the natural order of symptoms, but also the effects of medicines. Thus, in puerperal fever, while Dr. Gooch, unwedded to any doctrine on the subject, frankly states the result of his experience with respect to bloodletting, and cautions his readers against too exclusive a reliance on this measure, Dr Mackintosh, having inflammation only in his view, as developed after death, claims for it universal success, and attributes its failure to that worn out and convenient plea for all dogmatists, that it was not carried far enough.

Puerperal Peritonitis.—This subject will be so amply treated of in the next article, that it need not detain us long at

at present. We shall, therefore, rest contented with exhibiting the views of Dr. Mackintosh on the pathology of the disease.

“1st. The peritoneum is the tissue affected by inflammation in this disease, which extends itself without any preference throughout the whole extent of the membrane, without attacking one portion more than another, except that part of the peritoneum which forms the broad ligaments, in which place, it is probable, the disease first commences. Nevertheless the inflammation does not always appear to be general, being sometimes confined to particular spots.

“2d. The effused fluid found in the abdomen of women who have died of peritonitis, has nothing remarkable in it; it resembles the same matter found in peritonitis in men, and in the thorax of those who die of pleurisies. It varies in consistence and color in all these cases, but it is generally a white or reddish serous matter, containing flakes of albumen, more or less abundant, according to the intensity of the disease; it sometimes looks like pus.

“3d. The substance of the uterus has rarely been found diseased in any other degree than being sometimes large and flabby.

“4th. If a patient die in the first few days of peritonitis, we often find little vascularity, particularly if much blood has been drawn, although we are certain, from the previous symptoms, that inflammation had existed. If the patient survive longer, however, then we shall see the sero-purulent effusion. If the patient live still longer, the quantity of effusion is increased, and masses of coagulable lymph will be found glueing the intestines very slightly together. If the patient live still longer, the intestines will be matted together, and false membrane will be found covering the liver, spleen, and uterus, and the peritoneum itself will then be seen very vascular, and much thickened.

“5th. The pleura is also frequently found inflamed in this disease, as indicated by a similar sero-purulent effusion, and there is sometimes marks of inflammation and effusion in the brain.

“6th. This disease is more rapid in its course, and fatal in its termination, than ordinary peritonitis, from the peculiar condition in which a woman is left after parturition. In the first place, there has been an increasing determination of blood towards the uterine region during the previous nine months; in the second place, an increase of nervous irritability. So that the balance of the circulation is left at this period in a very unsettled state, which is readily upset upon the application of any of the usual causes; and when upset, the blood naturally takes its course towards the abdomen.

“These are at least some of the reasons for the venous congestion which takes place in many cases, in a greater or less degree, particularly in women who have been worn out by breeding, or who have been debilitated by previous disease, or insufficient food and clothing. In these cases, the heart and other vital organs are so much oppressed, that they cannot create reaction, or the system is too weak to do so. In one set of cases, speedy death takes place,

the patient sinking without any marks of local disease, unless it can be said to be indicated by vomiting and diarrhœa, with some confusion of intellect. In another set, although considerable congestion has taken place, it is not to such an extent as to destroy the patient; inflammation attacks the peritoneum under a suppressed reaction, and it goes on with a surface which is almost bloodless; therefore there is little or no heat of skin; the pulse is small and weak; the expression of the countenance ghastly; and the pain in the abdomen subacute. There are various shades and degrees of this complaint, according to the various combinations of these two conditions of the system.

“There are three other causes which enable us to account for the rapid march and fatal termination of puerperal peritonitis. The first which I shall mention is the occurrence of inflammation of that part of the peritoneum which covers the stomach, giving rise to those most violent symptoms which are described by authors under the title of gastritis. In a great majority of the fatal cases which have fallen under my notice, the peritoneum covering the stomach was highly inflamed; in several cases the whole stomach was in a softened state, and in all these cases there were most violent gastric symptoms. In the second place, inflammation of the peritoneum frequently takes place before delivery; sometimes as the original disease, and occasionally from the extension of inflammation and ulceration from the mucous membrane. The natural pains conceal the disease during parturition; afterwards the pain from inflammation is mistaken for after pains; and before alarm is taken, the patient is generally lost. I have seen many examples of this; and, since the publication of my Treatise, I have been able to anticipate what was to follow delivery, and have only lost one patient out of between twenty and thirty who had the disease. In the third place, something may be fairly attributed to the nature of the prevailing epidemic.”

In his treatment of this alarming affection, Dr. M. depends, of course, almost exclusively on vascular depletion general and local. He admits that stimulants may be necessary at the same time—the combined use of these opposite classes of medicines being by no means inconsistent with good pathology.

Chronic Peritonitis.—Among the appearances on dissection we find enumerated partial fungosities, slightly elevated, extending in patches of irregular shapes, and of a red color, looking very much like a coagulated bloody effusion. Tubercles also are formed as the result of long continued inflammation. Dr. Mackintosh has seen them, in the peritoneum, lining the general cavity, covering the stomach, intestines, liver, and spleen; he has also seen them in the omentum, the mesentery and mesocolon. When the mesenteric glands are affected, a corresponding part of the

mucous membrane of the intestines will always be found inflamed, and sometimes lacerated. These tubercles in the peritoneum are generally subsequent to the formation of those in the lungs; sometimes they arise from chronic inflammation of that serous membrane, consequent upon external violence. They resemble the miliary eruption in some cases; in others they are hard and of various sizes, up to that of an orange, occasionally resembling coagulated masses of blood; at other times they have the character of medullary sarcoma.

Inflammation of the Mucous Membrane of the Stomach and Bowels.—No subject presents greater attractions to the medical student at the present day. To this source are referred, by some of the most distinguished teachers of our art, almost “all the ills which flesh is heir to.” Even our most healthful sensations, the most refined and ethereal operations of our intellect, love, ambition, avarice, joy, grief, all have their seat and centre in the epigastric region!—in the gastro-enteric mucous membrane!

To ascertain the precise condition of the mucous membrane in health, is of the greatest importance as a guide to the knowledge of its diseased alterations. It presents then a whitish appearance, with a slight tint of rose color, in the highest degree of health. Bloodvessels may be discerned at distant intervals, but they are not found ramifying in great numbers, nor do they present discolored patches “unless there has been some great impediment in the circulation, or they have been produced by a natural progress towards decay.” Dr. M. does not hesitate to admit that many of the French pathologists have mistaken this kind of phenomenon for inflammation. And we are much mistaken if some post mortem examiners, in other countries besides France, have not likewise been deceived.

If the stomach of a person who has died from some disease, other than of this organ, be examined, it will be found slightly coated with mucus, not difficult to be removed. Two or three days after death, numerous rugæ will be formed, produced by the contraction of the muscular coat, while the mucous membrane is left free.

The splenic extremity of the stomach is that most liable to inflammation. In considering its diseased appearances, our author first considers the color. A change in color is not always owing to disease, but to post mortem changes; and Dr. M. cautions his readers against falling into the Broussaian error of confounding every change with inflammation. Dr. Yelloly's paper on the vascular appearances

in the stomach, frequently mistaken for the effects of inflammatory action, is referred to, and will repay attention. It may be found in the fourth volume of the London Medico-Chirurgical Transactions.

In some of the cases related by that physician, the whole intestinal canal was minutely injected with dark colored blood, in individuals who had been capitally punished. The circulation was very properly considered as having been carried on in the capillaries some time after death. The very appearance of the vessels, the exudation, and the structure of the mucous membranes must be our guides. The color may also depend on the infiltration of blood into the submucous tissue. A section of the part will show this. This infiltration may coexist with inflammation. In this case, the mucous membrane on dissection will be found affected, when in the former instance it will be healthy. The discolorations of this membrane are bright red, dark red bordering on purple, brown, slate colored, and black.

Vascularity. This may be arterial or venous. If the latter, large dark colored veins will be seen ramifying under the mucous membrane, and there will be few red vessels. If the former, red points will be observed, or numerous red vessels, and ecchymosed spots, and these not in depending portions of the organ, only. Wherever this circumstance is present, doubt may be entertained of the preexistence of inflammation, unless accompanied by exudation or alteration of structure. Vascularity must diminish very considerably after death, and particularly in recent inflammations.

Exudation. The tenacity, quantity, and color of this matter, require particular attention. When it is viscid, and considerable in quantity, upon a vascular surface, it is the product of inflammation. It varies in color from that of ordinary mucus to that of pus. Sometimes a red jellylike matter is discovered. The mucous membrane, when irritated, will yield a large quantity of thick tenacious mucus, of the color of starch. This was illustrated in experiments performed by our author, with the tartrate of antimony in large doses. The red jellylike exudation, is the result of very acute inflammation; that of a dark hue, darker than venous blood, more fluid than the last, and large in quantity, is the consequence of congestion.

Alteration of Structure. The mucous membrane may be pulpy and thick; the surface then looks granular and rough, and the membrane can easily be rubbed off. Abrasions are sometimes seen, but are more often the result of chronic than of acute inflammation. Ulcerations may occur in

the glandular structure, in the mucous follicles, or in the mucous membrane generally.

The inferior half of the ileum, is the part most frequently found inflamed and ulcerated; the colon stands next to the ileum, according to Dr. Mackintosh's observations, and the jejunum is seldom affected.

Sometimes numerous distinct points will be observed, as if a pen full of red ink had been spattered over the membrane; this is owing to exudation of blood from the follicles.

Ulcerations are observed of a circular or oval form, with defined margins, which have destroyed not only the mucous and submucous tissues, but also the muscular. Sometimes the mucous membrane is excavated to a considerable extent, and the peritoneum is thickened and inflamed, "the external surface being either covered with coagulable lymph, or looking like an excrescence of a dark red color." When the mucous membrane is ulcerated, the submucous and muscular coats sometimes become infiltrated with lymph, and a thickening of the rest of the intestine is produced. When ulceration attacks the muscular tissue first, an effusion of lymph takes place in the other cellular tissue, and then it is difficult to separate the peritoneum from the diseased membrane: or the ulceration may attack all the tissues, allowing the contents of the bowel to escape into the abdomen. The ulceration may occur in several places, and resemble carbuncle by its elevated edges and disposition to throw off a slough. The cellular tissue in the centre of these ulcerations is much thickened. The size and form of these ulcers vary; now small as a millet seed, then large as a shilling—now circular, then irregular and very extensive. Sometimes they have a red, sometimes a blanched, appearance. This last occurs where there has been great discharge by stool. The parts surrounding the ulcer, and advancing to the same condition, show marks of arborescent vascularity. Contractions of the whole tube are frequently produced by ulceration, when the whole mucous surface is affected. Its immediate cause is an effusion of lymph into the other coats. The mucous membrane is occasionally intensely red, and presenting, in one or two places, a seared appearance, as if it had been touched by a hot iron; it looks puckered, dark colored, and the neighboring part is slightly mottled, as if by white granulations.

An œdematous condition of the submucous tissue, is sometimes the result of acute action in the mucous. Air is also effused sometimes. Mortification presents itself under two forms: first, that observed in the stomach in cases of

fever, and in the last stage of phthisis, in which the mucous membrane is removed over a great extent of surface, which is left of a dark hue; secondly, that observed in the intestine, about the cœcum and ascending colon, in which the mucous membrane is lying loose, and in dark shreds, leaving a most offensive odor.

Inflammation of the mucous membrane about the colon and rectum, will terminate in a general thickening of the membrane, and also of those under it. The mucous surface is soft and spongy, abraded and discolored, here of a bright red, there of a dark mulberry color. No vascularity is perceptible, and infiltration of blood causes the discoloration. This appearance occurs in acute dysentery, and is apt to be mistaken for gangrene. The mucous tissue in the same portion of intestine is liable to hypertrophy. Ulcerations which have healed, are distinguished by the cicatrices which remain. Tubercles also occur sometimes.

Under *Gastritis*, the only circumstance related which is worthy of note, is the occasional mildness of the symptoms, even when the disease is severe and fatal. In one case, occurring in a soldier of the 17th foot, who swallowed a drachm of the muriate of mercury, and died unexpectedly, eight or ten days afterwards, there was ability to walk even to the last, the patient walking to the close stool on which he died.

Mucous Enteritis.—The tongue is not a certain index of the condition of the mucous membrane. It may be clean and natural in color, or foul without redness, when dissection shall reveal the most extensive inflammation. It is, in general, red at the tip and round the edges, although loaded in the centre. Sometimes it is altogether red, and looks raw and perfectly smooth: when unusually red, it is deemed by Dr. Mackintosh a mark of very considerable irritation, inflammation, or ulceration. We are inclined to believe that it is most frequently attendant on that form of disease which constitutes chronic dysentery, attended with those puriform discharges, which evidently proceed from ulcers in the large intestines. It is by no means an irremediable affection.

Chronic Inflammation of the Mucous Membrane.—Dr. M. has had frequent opportunities of seeing old cases of this affection. They will often be found connected with some cutaneous eruption or with ulcers on the extremities. The patients will then be observed to enjoy best health when the eruptions are most severe, or the ulcers most troublesome, and attended with copious discharge. Our author here takes occasion to impress on the mind of the surgeon the necessity of alluding to medical pathology in the treatment of external

diseases, such as those referred to. They are not always accompanied by internal disorder, but if a person affected by them says he feels better in his general health when they are most troublesome; if his skin is harsh, his thirst great, appetite unimpaired, and there is nausea; if uneasiness is complained of in the abdomen, the bowels irregular, and discharges offensive—the tongue loaded or red at the tip and edges, or loaded and covered with elevated papillæ at the root, then there is little doubt, says our author, that the mucous membrane of the intestines is affected. We could add to this statement, that disorder of the liver or spleen would equally produce the same symptoms, and be attended with the same vicarious, or, to use a fashionable phrase, cutaneous-sympathetic, affection.

In treating of the bowel complaints of children, Dr. Mackintosh condemns the too prevalent habit of administering castor oil in sugar and water, almost immediately after their birth, for the purpose of bringing away the meconium. He has seen fatal affections produced by this cause. To our lot it has not fallen to see the like. Against drastic purgatives we should protest as severely as he. Some children are constitutionally more free, and others more bound, than usual. Provided they thrive, no remedy should be employed. When the stools are very much disordered, having a watery, bluish or greenish and frothy appearance, slimy, or like baked clay, and very fetid, as well as irregular, all irritating causes must be withdrawn, and a quarter or half a drop of laudanum be given in a tea spoonful of solution of manna. The yellow watery stool, and the brown watery stool, announce an excess, while the bluish and whitish indicate a diminished quantity of bile. In the management of these cases, our author follows the general routine. In case, however, feverish symptoms are severe, and the discharges are very mucous, tinged with blood, and expelled as if they came from a squirt, the child cries much, and emaciates rapidly, the disease should be treated as inflammation of the mucous membrane of the bowels. The appearances on dissection in fatal cases warrant this view, as that membrane is found highly inflamed, and often extensively ulcerated. A leech to the abdomen, stimulating embrocations to the same, a warm bath, &c., will be proper.

Tabes Mesenterica.—On dissection. inflammation of the peritoneum will often be discovered, with enlargement of the mesenteric glands; more frequently ulcerations of the mucous membrane will be found. The whole internal membrane of the colon is found ragged in some cases, the other

coats being much thickened. In other cases, the jejunum will betray marks of ulceration, and the ileum still more. The chronic peritonitis has been often traced by our author to the extension of ulceration from the other membranes.

Dysentery.—Few diseases require more cautious treatment, and absolute independence of all exclusive systems and theories, than dysentery; and yet few have been so often made the subject of abstract speculation! To this circumstance we are undoubtedly to impute the very frequent failures in its management. All those who have been conversant with it will be ready to acknowledge that, endued with a variety of forms, it is not to be reduced to any Procrustean method of treatment, but that it must be regarded as a disease accompanied, it is true, by irritation, inflammation, or ulceration in the large intestines, but essentially different from these insulated affections, and differing in its essential character, like all idiopathic fevers, according to the epidemic character of the season, the individual causes which have induced it, and the situation and surrounding circumstances in which it occurs. No other view of dysentery can explain the alternate success and failure of the same methods of treatment, indiscriminately carried out to their full extent. Dr. Mackintosh, depending altogether on the morbid appearances disclosed after death, regards the disease as purely local, and of course his treatment is directed exclusively to one object.

His enumeration of symptoms in this severe affection is very full and graphic, and drawn evidently from personal observation, confirmed by extensive reading. He depicts the disease in its acute form, such as it is often encountered in tropical climates, running through its speedy course in a few days, and leaving awful traces of destruction behind it; and he also describes its milder and chronic forms also met with in the same regions, but more frequently, perhaps, in northern latitudes. Among the symptoms enumerated in the severe forms, is the throwing off of a large portion of the mucous membrane in a state of mortification. It is generally a fatal prognostic. Dr. M. has, however, seen a case of recovery after its occurrence.

The appearances on dissection we shall quote at large :

“*Appearances on Dissection, with Pathological Remarks.* In this country dysentery is rarely fatal, unless it attacks individuals who have suffered severely from the same complaint in India; nevertheless, my museum contains sufficient proof that it is more fatal than is generally supposed, and that examinations after death unfold the same appearances as seen in the mucous membrane in tropical climates. I have known several fatal cases in Edinburgh,

which ran their course in from nine to twenty days, and in which the whole of the colon, and part of the ileum, were in a state of complete mortification, the parts having the gangrenous fetor. In other instances, the colon, throughout its whole extent, was thickened and contracted; the mucous membrane being soft and spongy, and dark colored, looking more like a livid fungous excrescence, than an ulcerated surface; the color being retained even after maceration. An opinion has been too prevalent, that dysentery is always connected with a vitiated state of the bile, or actual disease of the liver itself; but the writings of modern pathologists have dispelled such erroneous notions."

Our author then proceeds to quote, from Dr. Marshall, the appearances in particular organs:

"*Omentum.* This organ is sometimes found greatly diminished; more frequently it is found much thickened, interspersed with numerous vessels turgid with dark colored blood, and easily torn. Sometimes it adheres with great firmness to the intestines, occasionally stopping up ulcers. Perhaps it adheres more frequently to the cæcum, than to any other portion of the intestinal tube.

"*Intestines.* The folds of the intestines are often found agglutinated together. Sometimes they adhere to the liver, and occasionally to the bladder. The colon appears studded or streaked with dark red or plum colored spots. Sometimes the contents of the intestinal tube are found in the cavity of the abdomen, having passed through a gangrenous orifice in the coats. When handled, the large intestines feel thick, heavy, and lumpy; they are likewise, in many instances, easily torn.

"Upon removing the intestines from the body, and slitting them up through the whole extent, a great number of lumbrici are commonly found; but as worms exist so generally in the intestines of Europeans in this country, their appearance cannot be considered as connected with dysentery. The inner surface of the duodenum is found covered with a viscid, glairy, semifluid substance, which has sometimes a yellowish, sometimes a greenish, color. Towards the inferior half of the ileum, small quantities of fecal matter are occasionally found, having a bright yellow color, and some degree of consistence. The contents of this intestine frequently resemble the healthy alvine evacuations of young children. The color and consistence of the fecal contents of the ileum are suddenly changed immediately upon passing into the cæcum. Nothing is ever found in the large intestines but a brownish offensive fluid, similar in appearance to the watery dejections which mark the last stage of dysentery. The intestines were never found to contain either scybalæ or fecal accumulation.

"The coats of the small intestines are generally healthy; sometimes they are redder externally than natural; this redness appears to originate from venous effusion, rather than from an actively excited state of the vascular system.

“ The mesocolon is frequently found much thickened, and containing a great number of vessels gorged with blood.

“ The chief traces of disease are found in the large intestines. The villous coat of the cæcum, colon, and rectum, when expanded, sometimes appears dark red, and extremely turgid; the turgescence is occasionally so great, as to resemble the tumid state of the inflamed conjunctiva during a violent degree of purulent ophthalmia.

“ Sometimes the villous coat appears, at a little distance, to be covered with a blueish puriform fluid, and thickly interspersed with dark grumous spots and patches. When more narrowly examined, the villous coat is found to owe the appearance of being covered with puriform matter to an extravasation of fluids into the substance of it, by which means it acquires a swollen and pulpy appearance. The dark red grumous patches are portions of the villous coat in a gangrenous state. These spots are generally surrounded by a red circle, the areas of which are various; frequently they are not more than about a third of an inch. Sometimes an individual slough may be compared to a tainted oyster. The mortified portion of the villous coat that is situated within the red circle is easily removed from the muscular coat, which is commonly found apparently not changed from a state of health. In some instances, the central portion of the slough had disappeared, leaving an excavation in the villous coat, as if a portion of it had been cut out. Even in these cases, the muscular coat was commonly sound. The villous coat was generally unattached at the margin of the excavation, and the finger could often be easily pushed under it from one depression to another. Sometimes, however, the sloughing extended into the muscular coat, and even into the peritoneal coat, which was rendered evident externally by the mulberry colored patches. The dark spots on the peritoneal coat are always much less extensive than the corresponding gangrenous portions of the mucous membrane. While one part of the large intestines has lost its natural tenacity from gangrene, another has sometimes acquired an increased power of resistance, and when cut into, conveys a semi-cartilaginous feeling to the hand. Sometimes large portions of the villous coat are found sphacelated without any intervening living parts. In these instances, it is extensively separated from the muscular coat, and is sometimes found loose in the cavity of the intestine. The gangrenous shreds occasionally stretch across the diameter of the intestine, like a bowstring. The separated portions of the villous coat are torn by the slightest force. They resemble, in appearance, pieces of dirty lint imbued with the ichorous discharge of a gangrenous ulcer.

“ Sometimes small collections of purulent matter are found between the villous and the muscular coats. This is, however, not a frequent occurrence.

“ Occasionally dysentery leaves traces of disease in the large intestines of a different kind, namely, tubercular ulceration. Ulcers of this character are not unfrequently found spread over portions of the villous coat, and, for the most part, in a remarkably distinct

and uniform manner. That portion of the villous coat which intervenes between the ulcers has, in general, a loose pulpy appearance. Sometimes it is turgid and reddish. Viewed at a little distance, the inner surface of the intestine appears to be sprinkled with a soft curdy like substance. These cream colored specks are of various sizes; sometimes they are not more than a line, at other times they are an inch, in diameter. Upon examining a small speck, the whitish substance is found to protrude a little beyond the surface of the intestine, and adhering, but not very firmly, to the villous coat. After removing this substance, a depression, or incipient ulceration is exposed. The base and margin of the indentation are generally dark red. The depression eventually increases, and becomes an ulcer, which is always encircled by a red portion of the villous coat. Sometimes the ulcers resemble the ill-conditioned sores, with prominent edges, which occasionally occur on the inside of the lips, particularly during a severe course of mercury. In general, the base and edges of the ulcers are indurated, unequal, and scabrous. When a section is made across them, a gristly feeling is communicated to the hand. The tubercular appearance of these ulcers is very remarkable. They sometimes resemble warty elevations, with excavated apices, in a state of ulceration. For the most part, ulcers of this kind are oblong: in length, they extend from half an inch to an inch; the breadth is seldom above half the length. The longest diameter is always in a transverse direction to the cavity of the intestines."

Disease of the liver is justly considered a casual, not an essential, feature of dysentery. It is, however, a frequent attendant.

Treatment. This is divided into that appropriate for the disease as it appears in Great Britain, and that proper in warm countries. In the first, fomentations are recommended, and castor oil with twenty, thirty, or forty drops of the sedative solution of opium; or, if the stomach is too irritable, calomel with opium, in small doses, to be repeated every second, third, or fourth hour, till a feculent evacuation is produced, assisted by injections of milk and water, or of thin gruel. Dr. M. considers it wrong to suppose that hardened feces are always lodged in the bowels in this disease; yet it is often, very often, the case at the commencement. Should febrile symptoms be present, bleeding is indicated, and leeches may be afterwards employed. After the irritation is subdued, large and full doses of opiates are to be given. Should the liver be diseased, small doses of calomel, or blue pill, will be proper. As external counterirritants, fomentations of hot spirits of turpentine will be found efficacious. If the disease is severe, Dr. M. recommends a blister. We should disapprove of this latter prescription, if ordered to

one of our patients laboring under dysentery, because we think it, in the first place, superfluous, as we can reach the disease by more direct means; and, secondly, as it would be excessively annoying to his already too irritated frame, by the pain it would occasion in his frequent motions to stool.

Strychnine, so highly recommended by Drs. Stokes and Graves, in doses of one twelfth of a grain, on the authority of Dr. Rummel, in Hufeland's Journal, has been tried by our author, and found "exceedingly beneficial, even in cases where there were most extensive ulceration in the bowels. It succeeded after every other remedy had failed." He also speaks favorably of the acetate of lead, given in two or three grain doses several times a day, and of the sulphate of copper, so strongly recommended by Dr. Elliotson. For the flatulent distention of the bowels, which is frequently a troublesome symptom in dysentery, turpentine, assafoetida, or tobacco injections, are recommended.

Treatment in Warm Climates. As dysentery is more severe in the tropics, its management by the physician requires a proportionate increase of energy. Bleeding, general and local, is the first measure recommended by Dr. M., and great stress is of course laid upon its active employment. Mr. Annesley, in his work on the diseases of India, suggests a preference for leeches in shattered constitutions, as "they diminish action without destroying power." From this statement Dr. Mackintosh dissents *toto coelo*. He is certain, "by experiments and careful attention, that individuals will bear the loss of blood better, ounce for ounce, by general bleeding than by leeching." Without presuming to decide on so weighty a matter, we shall simply state it as our opinion that in many of these cases, detraction of blood had better be altogether avoided, unless the voice of experience is no longer to be listened to, and the dissecting room is to be our exclusive counsellor.

Dr. Mackintosh condemns the use of full doses of calomel as baneful, the proportion of deaths being very great under this practice, say twenty and even thirty per cent. As Dr. M. can or will see nothing but inflammation and ulceration of the intestines in this disease, it is not to be wondered at that he should denounce mercury as so far from curing the disease, that he knows no plan more likely to produce it. His only doubt is, whether calomel, or the long continued use of drastic purgatives, is the worst. What becomes then of the experience which has been, and is still, accumulating in favor of the scruple dose practice? Dr. M. does not object altogether to the use of calomel; he wishes to prevent an

exclusive reliance on it, and in confirmation of his views, he calls in the testimony of Cheyne, who practised in Dublin. This is scarcely treating the tropical physicians with fairness: but it will ever be thus with the followers of exclusive doctrines.

“Melius, pejus, prosit, obsit, nil vident nisi quod lubent.”

Our own views of the treatment of dysentery, are simply these: During those seasons in which an inflammatory type prevails, or in plethoric and robust subjects, it will be always advisable to bleed largely at the onset of the disease, and to reduce the force of the circulation, which might else threaten local disorganization and gangrene. Leeches may also be applied with a very happy effect after the local disease is developed; but the main reliance of the physician must still, in all cases of dysentery, as of fever, be on those means which will divert the force of the disease from the internal organs, restore the lost balance in the great systems of the body, and substitute a new and healthful action, in lieu of the morbid processes going on, not only in the intestines, but throughout every part of the system. What this action is, it is impossible for us to explain. Certain it is, that the local inflammation does not altogether constitute it. It is often not developed for several days after the invasion of the general disease. Now calomel has been found, in an immense number of cases, to fulfil the above indications more speedily, safely, and effectually, than almost all other medicines combined. And shall we, then, refuse to employ it, through an hypothetical fear that it may prove an irritating application to the inflamed surfaces with which it may come in contact? Has calomel no other action than a local one on the mucous surfaces, and does it delay its alterative or deobstruent effects until it has reached the caput coli? We are not ignorant of the fact that other remedies will occasionally overcome dysentery—emetics, sudorifics, small doses of ipecacuanha, opiates, all have in their turn achieved this victory. But analyze the action of any one, or all of these, and it will be found to consist in restoring the locked up secretions, and relieving the vital organs of the undue accumulations with which they have been overburdened. Opium is perhaps an exception, as that medicine acts chiefly in allaying the excessive nervous irritation always present in this disease. It will, on that very account, seldom subdue the disease, if employed alone. While these effects will often be obtained from these medicines in sporadic and mild cases, they will more often disappoint the practitioner who trusts to their agency in

more severe and epidemic cases. In these, he wants the continued agency of all, and no medicine will produce so desirable effects as calomel.

Cholera.—We are somewhat surprized to find Dr. Mackintosh contesting the idea that cholera is a disease of inflammation. The following is his pathology, and it might, in our opinion, have been extended, with great propriety, to some other diseases already described.

“The first thing which occurs in viewing the disease itself, and the accounts which have been given, is the irregular determination of blood, which leaves the surface of the body quite pale. As in the cold stage of intermittent fever, many people have exhausted their ingenuity in abortive attempts to discover the cause of this phenomenon, instead of enquiring into the effects produced. ‘The first point of enquiry ought to be directed to discover what has become of the vital fluid? This is most satisfactorily answered by the numerous dissections which have been recorded by different individuals. The balance between the arterial and venous systems is lost, and the blood becomes congested in the latter. In the majority of cases, the liver and mesenteric veins show most engorgement; but in some cases which occurred at Ceylon and other places, the venous system of the brain was congested, and the liver was quite free. Thus, Dr. Johnson informs us, that some of Mr. Finlayson’s patients died after a few hours, without any signs indicating cholera, except diminution of strength, and the following marks were found on dissection. Much congestion of the brain, presenting layers, as it were, of black coagulated blood, or covered with general ecchymosis. In some cases, abundance of blood of the same color flowed both from an incision into the brain, and from the sheath of the spinal marrow.

“In some cases, the liver has been ruptured from the impetus of blood. Another circumstance worthy of remark, is the general absence of bile in the intestinal tube, as well as the suppression of urine. The general torpor which prevails, and which comes on so suddenly, may be fairly attributed to the congested state of all the vital organs. The spasms and cramps which take place, may be also partly attributed to the same cause. The state of the blood deserves also to be noticed; it is thick and very dark colored when drawn from a vein. Almost all writers notice this, even at an early period of the disease; and I beg particularly to refer to the valuable cases published in Mr. Annesley’s work already quoted, and to his pathological observations at page 126.

“The dark and pitchy appearance of the blood, when drawn from a vein, is not peculiar to this disease: it is seen in the cold stage of intermittents: I have seen it in the cholera which prevails in this country; and it is also observed in many of the cases of fever which are called congestive. It shows, I imagine, that the lungs suffer very much from congestion, early in the attack. ‘The lungs (says Mr. Annesley) were generally shrunk, collapsed, filled with

black blood, heavier than natural, and of a fleshy, hepatized, or bruised appearance.' In fact, all the functions of the body, in this disease, seem to be impeded or destroyed, except that of the mucous membrane of the stomach and bowels, which appears to be engaged in secreting and discharging an immense quantity of serous fluid; this must be regarded as one those efforts of the constitution which we see so frequently in operation to save life."

We shall pass over the treatment of this fearful malady in silence. We regret, however, to find the author, in his text, railing in personalities, at once undignified and very much out of taste, against a learned cotemporary, the very able editor of the *Edinburgh Medical and Surgical Journal*. On the merits of the point in dispute between the parties, we shall not touch, but we do think a system of medicine not the most appropriate depository of private feuds or momentary differences, which can have no possible interest for the profession at large.

Inflammation of the Muscular and Cellular Tissues.—Although these are not so apt to be inflamed acutely, they are often the seat of chronic inflammation. Dissection, in this case, displays the peritoneal and mucous coats unaffected, and the muscular, thickened, indurated, and contracted. The parts more frequently found in this state, are the point of union between the stomach and duodenum; that between the ileum and jejunum; the termination of the sigmoid flexure of the colon, or some part of the rectum; and lastly, the whole extent of the colon. Obstinate constipation is the most frequent symptom of this affection. It must not be confounded with scirrhus, in which there is disorganization as well as thickening, so that the different tissues are confounded. Meckel supposes, that scirrhus degenerates commences in the tissue which incloses the vessels and mucous glands, from whence it extends itself so as to involve the mucous and muscular coats, destroying their natural appearance, thickening and hardening them, and terminating at last in cancerous ulceration. The peritoneum generally escapes. In two preparations only has Dr. M. seen tubercles projecting from the serous coat, when scirrhus affected the other coats.

Omitting any notice of the chapter on the diseases of the liver and spleen, which does not contain any novelty, we come to the

Diseases of the Respiratory Organs.—In our first number, we directed the especial attention of our readers to the importance of acquiring an accurate and nice knowledge of auscultation, as the only safe guide in forming a diagnosis in

the study of thoracic diseases. Dr. Mackintosh is an able and zealous advocate of the employment of the stethoscope, and he devotes a very pertinently written chapter to a discussion of the very futile objections which have been advanced against it by the lazy and the ignorant. Among these objections, there is one we have often heard urged, and it is thus triumphantly met.

“They also state, that it is indelicate to examine the chest of a female with this instrument, under any circumstances; and that it frequently cannot be done, in consequence of the fatigue it occasions to the patient. With respect to the first, I have to observe, that it is an objection which I should only have expected from one individual in the British Empire, sir Anthony Carlisle. I feel convinced that every professional man of experience will join me in the following statement, that fewer objections are started by females possessing delicate and innocent feelings, to any kind of examination which their medical adviser may think it necessary to propose for their advantage, than by those who unfortunately are differently constituted. It is to be lamented, that this objection is brought forward more in the spirit of special pleading, than with a view either to benefit science or good morals. It may be maintained, however, with truth, that the examination may be made in such a manner, as not to occasion the slightest blush, as the patient need never be exposed, the different sounds of respiration being sufficiently heard for all useful purposes, through the texture of an ordinary night-gown. Instead of meeting with objections on the part of females, it has always occurred to me to observe not only a readiness, but an anxious desire, that the investigation of the nature and seat of any disease in the chest, should be carried out to the most complete elucidation. Cases no doubt occur, in which it is inconvenient and painful to move the patient much; but these are comparatively rare, and must be so far disregarded when life is at stake.”

Affections of the liver are very apt to be mistaken for diseases of the lungs, and vice versa. Whenever there is reason to entertain the least doubt, (and to the ingenuous physician frequent occasions will occur to do so,) it must be of the greatest consequence to the patient that a correct diagnosis of his disease be formed. This can scarcely be done without recourse to auscultation. As proof that mistakes may often be made, the author furnishes us with the following fact.

“A physician treated a patient during some time, for a pulmonic complaint, without knowing its exact nature or seat, which he could not fail to have discovered, had he been able to use the stethoscope. After a little time, the patient complained of uneasiness in the abdomen, and the liver was felt rather prominent on the right side, but pressure did not aggravate the symptoms. It then came out, that

the man had been in India for several years, and as that was the case, it was supposed he could not fail to have drank plenty of arrack, and therefore to have contracted an affection of the liver. He was accordingly salivated over and over again, but the enlargement continued to increase; and it may be briefly stated that the man died. Upon dissection, his liver was found to be perfectly sound, and that the protrusion was occasioned by an effusion into the left side of the chest, which pressed down the diaphragm, and encroached upon the abdomen."

Pleurodynia, or a painful affection of the intercostal muscles, is often confounded, by routine practitioners, with inflammation of the pleura, &c. Dr. Mackintosh thinks the resemblance so great, that the former cannot be distinguished from the latter without the use of the stethoscope. The importance and certainty of the developments made by this invaluable instrument we do not deny, and we accordingly recommend it as indispensable in all cases: yet we do think that an attentive examination of *all* the symptoms present in any individual case, will generally indicate the true nature of such distinct affections, to a sagacious and accurate observer. The author himself coincides with us in this opinion, when he states, in a subsequent paragraph, that there may be much mischief done by those who attempt too much by the stethoscope exclusively. "It is a great assistance, as an additional means of diagnosis," but after all, its advantages, however great, are rather negative than positive. We fully agree with Dr. M., on the other hand, that symptomatology alone should not be relied on, in the present improved state of medical science.

"Some medical men allege, that they can discover every condition of the lungs, quite well enough for all purposes, by the ordinary symptoms; therefore I shall now take a view of these symptoms, for the purpose of showing the fallacy of this statement. The following symptoms are supposed to denote inflammation of the lungs, in the most satisfactory manner: Cough, dyspnœa, pain, quick and strong pulse, being softer, however, when the substance of the lungs is inflamed, than other parts. When these symptoms exist, they are supposed to be peculiar to inflammation of the lungs, that is to say, when they exist, inflammation is present; and when they do not exist, the disease is absent. Experience enables me to state, that not one of these symptoms, nor all taken together, positively indicate inflammation of the lungs in any of its textures, and that inflammation may exist without any of them being well marked; hence it is, that symptomatical physicians are so often astounded with the appearances on dissection, which they did not anticipate from the mildness of the symptoms; and hence it is, they too often decry the usefulness of morbid anatomy.

“Cough is not peculiar to disease of the lungs; it may be produced in a violent degree by any kind of irritation about the larynx, epiglottis, and even the pharynx; mere excitement of the circulation, frequently produces cough, as well as diseases of the heart. I shall afterwards prove, that in some of the most hopeless cases of inflammation of the lungs, the patient *cannot* cough, in consequence of which the danger is greatly increased; therefore cough cannot be said to be peculiar to inflammation of the lungs.

“Dyspnœa is as frequent a consequence of disease of the heart, as of the lungs; mere excitement in the circulation will produce both cough and dyspnœa. One of the most distressing cases of dyspnœa which I have ever had the misfortune to witness, dissection proved to depend on an enlargement of the gland, which fills up the angular space at the bifurcation of the bronchial tubes. From a mechanical cause, also, œdema of the inferior aperture of the glottis frequently produces a fatal dyspnœa. In many cases of extensive and severe inflammation of the bronchi, after free expectoration, the dyspnœa subsides so completely, that should a symptomatical physician happen to make his visit at that period, he will pronounce the patient to be convalescent, when perhaps, within an hour or two, he will be no more. Even in pneumonia, if the inflammation is confined to a small part of one lobe, which it frequently is, there is little dyspnœa, and the whole of one lung may be destroyed by chronic inflammation, without occasioning much difficulty of breathing, if the disease goes on very slowly.

“With respect to pain, nothing is more deceptive, for there may be severe pain in the chest without inflammation, as has been already stated in the affection denominated pleurodinia. In bronchitis, there is little or no pain; in pneumonia, the pain is generally little marked; and, contrary to the statement made in all systematic works, respecting the severe pain in pleuritis, experience enables me to state, that it may go on most extensively, even to a fatal termination, without much complaint; hence we often see, on dissection, most extensive adhesions, of long standing, between the *pleura pulmonalis* and *costalis*, in individuals who had never been remembered to have experienced any very serious indisposition till their last illness.

“It has already been shown, that a hot skin is not an invariable phenomenon in inflammation, and the same remark may now be made with respect to inflammation of the lungs; indeed, in bronchitis, the heat of the skin is frequently below par.

“It has also been already shown, that the pulse cannot be depended upon as a certain indication of inflammation; and, in addition to the remarks already made in this work, I may now state, that hypertrophy of the left side of the heart frequently produces a strong bounding pulse, and also dyspnœa, when there is no inflammation going on in any organ of the body; and, on the other hand, dilatation of the left ventricle will produce a weak, soft pulse, at a time, perhaps, when every form of pneumonic inflammation is going on most rapidly.”

Bronchitis.—The chapter on this interesting affection is full of important information, but it will not admit of condensation. We cannot deny ourselves the satisfaction, however, of quoting the following paragraph, of which the direct bearing and utility will be sufficiently obvious :

“ In making *post mortem* examinations, with a view of discovering the nature and seat of bronchitis, these accidental morbid alterations of structure should be kept in mind, along with the symptoms and progress of the case ; because, although they may form the most prominent appearances on dissection, and are no doubt in many instances the cause of death, yet they are only to be regarded as the effects of the original disease. Nay, sometimes an individual laboring under acute or chronic bronchitis, may have expectorated freely, immediately before death, either during the act of coughing or vomiting, when we shall find little or no effusion in the bronchial tubes, and sometimes very little redness. It is proper also to state, that notwithstanding the attention which has been paid of late years to the pathology of the lungs, there is still a great deal of ambiguity connected with this subject, arising out of the knowledge of the fact, that dividing the pneumogastric nerves in animals, produces dyspnœa, change of voice, and effusion into the air passages.

“ Of all the symptoms, wheezing is the one which may be said to be peculiar to bronchitis ; cough and dyspnœa, it has already been shown, are common to all diseased conditions of the lungs, and not only of the lungs, but of other organs. Some assert that it is owing to spasms, but this not the case, for we find that it is greatest before expectoration takes place, the patient afterwards being pretty free from it, till a fresh secretion collects in the air passages. The dyspnœa has also by some been attributed to spasm. Reisseisen thinks he has ascertained the existence of circular fibres in the ramifications of the bronchii, commencing at the point where the cartilaginous circles terminate. Laennec supposes that he has himself also proved the existence of these fibres upon branches of the bronchii, of less than a line in diameter ; and, therefore, concludes that spasmodic contraction of these fibres occasionally produces dyspnœa. I am far from admitting this structure in the present state of our knowledge ; but, even if it were so, it is of little consequence, when there is an increased quantity of mucus in the tubes themselves, offering a sufficient mechanical cause for the phenomenon itself, and for the exacerbations and remissions, which are so frequently observed in all the forms of bronchitis. Whatever consequence may be attributed to such a structure, in accounting for the symptoms in some cases of asthma, it is of little practical importance in acute or chronic bronchial inflammation.”

In describing the treatment, Dr. Mackintosh particularly insists on the caution to be observed, in carrying bleeding and debilitating measures to too great an extent, after mucus has collected in considerable quantity, and in double

bronchitis, more especially, where death may ensue from depriving the system of the due strength, requisite to produce expulsion of the matter by coughing.

In children, Dr. M. thinks it far better to draw blood from a vein, than by leeches; and this opinion he founds on the result of considerable experience.

"Purgatives," he observes, "were, at one time, thought highly injurious in all inflammatory affections of the lungs, but upon erroneous pathological views." Several years ago we advocated the propriety of their use, with certain restrictions to be observed after expectoration was unavoidably established. This very process may, however, be dispensed with, and altogether prevented, by their timely administration.

Opiates are, in general, condemned by our author. He admits, however, that they may be sometimes useful in the *first* stage, after the disease has been got under by the lancet, when they subdue irritation, the continuance of which would lead to a relapse. This is Armstrong's view, and a very correct and practical one.

Laryngitis.—Our author's chapter on this interesting affection is rather jejune. The description of it by the former principal editor of this Journal, in the fourth volume of the old series, contains the most complete and practical information extant, with respect to its symptoms and treatment.

Chronic Inflammation of the Trachea.—Under this head, we find the following interesting case :

"Edward Currie, æt. 40, a laborer, up to the period of the great fires in Edinburgh, which took place in November, 1824, had always been a healthy, stout man. During his attendance in working the engines, and in carrying water, he was exposed to cold and wet, and was subsequently affected with what he called a severe cold and sore throat, attended by occasional headaches; but having a large family, and being of industrious habits, he continued to work at his daily labor. On the 2d of January following, he became worse, and was unable to go out, but sat at the fireside almost the whole of the day, complaining of chilliness, sore throat, and tightness about his chest. After passing a bad night, he sent to my dispensary for assistance on Monday. At five o'clock in the evening, he had severe rigors with difficulty of breathing, and at half past six, was visited by one of my pupils, Mr. Marshall, whose name is associated with many interesting cases, and from whom I received the following report: 'On seeing him, I believed he had caught a cold; he complained of sore throat, and evinced some uneasiness in swallowing, but there was no appearance of inflammation of the fauces, nor pain on pressing the windpipe. The rigors were still severe, the pulse strong, beating about 70 in the minute, and there

was a sense of constriction in the chest. He was bled to the amount of eighteen ounces, during which the rigors ceased, but afterwards returned.'

"Mr. Marshall thought his patient was in no danger, and that the symptoms would soon give way to the remedies he had prescribed; but, in about an hour after he took his leave, the dyspnœa became much worse, attended with severe rigors. Mr. Davidson, a respectable surgeon in the neighborhood, was immediately sent for, who found the man in such a dangerous state, that he wished me to be present before any step was taken; but soon the symptoms became so much more urgent, that he could no longer wait, and he opened a vein in the arm; the blood was flowing on my arrival. About eighteen ounces were abstracted with very little or no relief: although a large orifice was made, the blood did not flow in a stream, and it was very dark colored and thick. It coagulated very imperfectly, yielded no serum, and had every appearance of what is commonly called 'dissolved putrid blood.' The state of the respiration sometimes resembled that which is heard in croup, after the formation of the false membrane; at others, that of whooping cough, during the paroxysm; indeed, the similarity was so great, that I heard a number of women discussing the point. It was ascertained that he experienced the greatest difficulty in breathing during the act of *inspiration*, when he made the shrill crowing noise. There was cough. He spoke distinctly after the bleeding, which he could not do before, but it was in a low voice, and seemed to cost him a considerable effort; he said, 'I feel rather better.' His face was pale and anxious, and I was told that it had been so for several hours; pulse rapid and feeble. Upon being subsequently asked if he had any pain, and where it was situated, he replied by placing his hand upon the thorax, and nodding. During the momentary absence of Mr. Davidson and myself, in an adjoining apartment, the patient felt a desire to make water, and actually got out of bed unassisted, and lifted the chamber pot. Upon our return, he was cautioned to lie down, and on no account to make such an exertion again; but he persisted, declaring he felt somewhat better, and in a moment afterwards he was dead.

"The body was opened thirty-six hours after death. The following were the appearances observed: Right lung attached throughout its whole extent, by old adhesions, to the pleura costalis, left lung free. The lungs and trachea were then carefully dissected out, including the root of the tongue, and minutely examined. The lungs themselves were of a very dark color, heavy, and congested everywhere with dark colored blood; and although there was no hepatization, yet two thirds of these organs, when separated into small pieces, sank in water, a little below the surface; this was proved not to depend on alteration of structure, for, by washing, they were restored to their natural color and buoyancy. The mucous membrane, everywhere in the larynx, trachea, and bronchial tubes, was of a dark red color, and coated with reddish mucus; but the bronchial tubes were not gorged with it, as seen in the lungs of those who die of bronchitis; the larynx was found so much os-

sified that, after slitting it open, it could not be separated to any extent; the mucous membrane, at this part, was found so much swollen, as to leave the smallest possible passage for the transmission of air at the superior, but particularly the inferior, aperture; the epiglottis was also much swollen, erect and stiff, and of a red color."

We record this case to show the negligence with which symptoms are too often described; yet those which are detailed show us convincingly that the affection of the larynx was the prominent cause of death. Hence the difficult deglutition, the peculiar respiration and cough, the shrill crowing noise, the low voice, difficult articulation, and the sudden death.

Hooping Cough.—Dr. Mackintosh believes that there is something peculiar in this disease, and that the nervous system is very seriously involved; but the doctrine of spasm, he thinks, should be cautiously received in the present state of our ignorance of the structure and functions of that system. "The essence of the disease," he says, "consists in irritation and inflammation of the mucous membranes of the body, but more particularly of the air passages." How does it then differ from catarrh, or rather influenza? It commences like catarrh, it is true, but, after the first stage, it assumes a character altogether peculiar to itself. Of this the author is fully aware; but he will not agree to discuss the question, whether it is owing to a peculiar affection of the nervous system, for the reason just stated, of our ignorance of neurology. A congestion is *somehow* produced in the lungs; hence arise the dyspnœa, cough, and the reaction, more or less violent, of the whole system, by which the determination to the lungs is diverted to the skin. Although Dr. M. does not satisfactorily explain all the known facts in relation to this singular disease, it is gratifying to find a writer of so much talent and observation not following the mass, of whom a part confound it with bronchitis, another with cephalitis, and a third with both combined! The great secret is to regard this affection as simple and distinct in itself, but very liable, from obvious and numerous coincidences, to be complicated with the several diseases, which have all, in turn, been supposed to constitute its essence. This is the only view which can lead to a discriminate and rational methodus medendi in hooping cough. But of this elsewhere.

Pneumonia.—In the treatment of inflammation of the lungs, while Dr. M. urges the indispensable use of the lancet, he also cautions against the latter; and believes that

more mischief may be done by too little, than too much, bleeding.

“I have the history of a case before me, in which one hundred and ninety-two ounces were taken from one individual; but I am persuaded that, if he had lost two thirds less, it would have been better for him. Several months afterwards he was weak and miserable, and it appeared very doubtful whether he was ever to regain his health. On one occasion, early in life, I very nearly lost a patient, from whom I had taken, at different times, in the course of four days, one hundred and twenty ounces of blood, but who recovered after the exhibition of stimulants; and I have seen several cases, within the last ten years, to which I have been called in, where considerable injury had been inflicted by very large bleedings, the medical attendants having allowed themselves to be misdirected by the continuance of dyspnœa, which increased after each abstraction of blood. It was evident that this was owing to a want of sufficient blood in the system. In one instance, the patient was on the very brink of the grave, with a pale sunk countenance, and cold extremities: the strongest stimulants were administered, along with opiates. All these cases eventually recovered.”

The chapters on pleurisy, hæmoptysis, and phthisis are full, but are acknowledged compilations from Laennec and the latest French authors.

Asthma.—In the chapter on this affection, we find the following opinion of its nature:

“There cannot be a doubt, but that the nervous system has a powerful influence on the functions of the lungs, when laboring under disease, as well as in health; and I imagine no one can deny that asthma may be produced either in consequence of some diseased action in the brain, or in the nerves themselves which supply the lungs. It has been attempted to be shown, by Reisseissen and Laennec, that the bronchial tubes possess a muscular structure, through the agency of which the air vessels contract, when under the influence of spasm; but neither is this a new idea on the part of Reisseissen nor Laennec, for Cullen makes the following statement: ‘From the whole of the history of asthma now delivered, I think it will readily appear, that the proximate cause of this disease is a preternatural, and in some measure a spasmodic, constriction of the muscular fibers of the bronchiæ, which not only prevents the dilatation of the bronchiæ necessary to a free and full inspiration, but gives also a rigidity which prevents a full and free expiration.’ (Par. 1384.) But neither is this an original idea of Cullen’s, for it was entertained long before his time, by Hoffman and Willis. It is foreign to the object of this work, to enter into anatomical controversy, and unnecessary in this instance, for even Laennec states that he had ‘met with only a very small number of asthmatics, in whom there was evidence of pulmonary spasm, without any attendant catarrhal affection; but some few I have met with. On the

other hand, I have known a great number of patients, in whom the catarrh, whether dry, pituitous, or mucous, was too slight in degree, or too small in extent, to be considered as the real cause of this asthma.' (Page 412.) Because, perhaps, there might be in these cases some organic lesion of the heart and large vessels, or the co-existence of cerebral irritation. These observations lead me to remark, that there is almost always something more in this disease than the original organic lesion in the lungs themselves; this, experience has frequently led me to trace to sudden congestion of the lungs which flattens the air vessels, and prevents them from dilating."

Diseases of the Circulating System.—After some valuable introductory remarks on the importance and advantages of studying the diseases of the heart, which have been too often deemed irremediable, and on the employment of the stethoscope, our author takes up the consideration of the individual diseases of the vascular system.

From the chapter on angina pectoris, we select the following pathological remarks:

"The great error which subsequent writers have committed, is attributing angina pectoris to one particular disorganization; thus, one has attributed it to ossification of the cartilaginous extremities of the ribs; a second, to ossification of the valves of the heart; a third, to fat accumulated about the heart; a fourth, to dilatation and hypertrophy of the heart. Dr. Parry supposed that it depended on ossification of the coronary arteries; Dr. Haygarth, on inflammation of the mediastinum; Dr. Hooper, on diseases of the pericardium; and there are many who think it is produced by asthma, who, upon the confined principles adopted by symptomatical pathologists, convert a symptom into a disease, and who are constantly seen to confound cause and effect. Dr. Hosack, an American physician, is of opinion that it most frequently arises from general plethora, more particularly 'from a disproportionate accumulation of blood in the heart and large vessels.' I have to state, that I have seen all these morbid appearances on dissection, in subjects who were never affected with angina pectoris; and it has been alleged, and I believe truly, that patients have died suddenly from this affection, in whose bodies not the slightest trace of disease of any kind was perceptible, which has led some to assert that it depends upon scrofula, syphilis, a nervous temperament, or a peculiar affection of the *par vagum*. Dr. Parry's opinion, however, seems still to have great weight with some in the profession; but it may be mentioned, that I have seen two cases in which the coronary arteries were extensively ossified, and a third, in which they were completely so; and yet none of the patients had symptoms of this disease. A remarkable case of the same kind, which happened many years ago, is detailed in the first volume of the 'Medical Communications,' by Mr. Watson. In justice, however, to the memory of Dr. Parry, it ought to be stated, that he did not attribute the disease

entirely to the effects of ossification of the coronary arteries, for he distinctly states, that the symptoms show that an accumulation of blood about the heart and large vessels takes place. This statement goes so far to confirm the opinion of Dr. Hosack, which, Dr. Forbes assures us, is more in accordance with his own observation, than any of the other opinions; but he adds, (at page 692 of his Translation,) that 'in persons subject to this complaint, in whom no severe organic disease of the heart existed, I have generally found, by auscultation, that the organ was possessed of thin parietes and feeble powers.' In my work on 'Puerperal Fever,' which was published in the year 1822, a case of angina pectoris is recorded, (at page 83,) which was evidently produced by a congested state of the heart and large vessels near it. The life of the individual appears to have been saved by timely bloodletting; upwards of six years have now elapsed, and there has been no tendency to a return of the disease, which may be attributed to attention to the bowels, and a proper regimen."

Dilatation of the Heart.—The following most interesting case of this severe affection will conclude our extracts from the work of Dr. Mackintosh:

"J. M., aged 29, a medical student, very tall, stooping in his gait, of a fair complexion and light hair, had been affected, for about a year, with symptoms which he attributed to disorder of the stomach. He complained of a feeling of distension and weight in the epigastrium. Occasionally, he was troubled with a short dry cough, and palpitation of the heart, excited generally by any sudden or unusual exertion. The pulse was naturally slow and full.

"These symptoms gradually became more constant and troublesome. In July and August, 1823, he had occasion to exert himself considerably in his professional pursuits, and the feeling of uneasiness in the epigastrium, and palpitation at the heart, proportionally increased; but appeared to him to be constantly relieved, when his bowels, which were generally costive, became relaxed by the use of medicine.

"In September, his complaints were much aggravated; towards evening, the short tickling cough became exceedingly troublesome, and, when he placed himself in the recumbent posture, he was frequently seized with feelings of suffocation, which forced him to sit up. The difficulty of breathing, accompanied by a sensation of constriction in the breast, was, at times, considerable; and the paroxysms which seized him during the night, he compared to asthmatic fits. He was frequently obliged to rise during the night; and, when he did sleep, was often suddenly awakened by the sense of suffocation. Towards morning, he became easier, and enjoyed some rest. During the day, he was comparatively well. He was thin and pale, but complained little, except of want of rest. He went about his medical studies with ardor and assiduity; but, on making any unusual exertion, he was immediately seized with the short cough, and, on mounting a flight of steps, or an ascent of

any kind, he was often obliged to stop suddenly. On walking quick, his strength failed, and he complained that his limbs refused to perform their office. On examining the pulsation of the heart, at this period, it appeared to be placed immediately under the hand; instead of the usual quick and hard stroke, a prolonged pulsatory throb was distinguishable, extending over a larger than usual surface. To the stethoscope, both the left auricle and ventricle gave a clear sharp sound, distinctly observable, also, under the clavicle of the right side.

“In October and November, he became gradually worse. The paroxysms at night were more frequent, and more troublesome; and he was generally obliged to sleep in the sitting posture. He sometimes, however, passed days and nights pretty comfortably, and he believed that this was principally the case when his bowels were freely opened.

“In December, the oppression and sense of fulness in the epigastrium increased to so great a degree, as to render the slightest pressure on the part insufferable. The veins of the neck were observed, at this time, to be full, and a strong pulsatory motion was given to them above the clavicle. He still continued his studies with ardor, and refused to confine himself; but on mounting stairs, or walking quicker than usual, he became completely exhausted, and was often obliged to rest himself. On the 12th December, he felt himself much worse, and weaker. On the 14th, a material change for the worse had taken place; his face was pale and anxious, the lips bluish, and the ancles œdematous; still he conversed cheerfully, and without the least alarm. The pulse was small, and about 120. On applying the hand to the region of the heart, the usual quick, hard beat was not to be felt; but there was a kind of violent pulsatory struggle perceptible over a considerable space. A physician saw him, and the medicines he recommended were employed with great apparent benefit. Mr. M. thought himself better; the œdema of the legs disappeared, and the cough became less troublesome; the palpitation at the heart had subsided; and he complained only of the sense of weight in the epigastrium. During the day, he was tolerably well, but about ten at night, he became hot and exceedingly restless, continually shifting his posture, in the vain hope of repose. This continued for some hours, when he generally sunk into a slumber, and continued till morning bathed in a copious perspiration. On Friday, 26th, he was much worse. At 4 P. M. he was sitting up and conversing cheerfully; but his legs were more swollen; his pulse irregular; the pulsations of the heart could not be felt in the usual place, and an undulatory pulsatory feel was communicated to the hand, when placed on the epigastrium. About 8 o'clock, his breathing became oppressed, he sunk into slumber, and died without a struggle.

“The body was examined about sixty hours after death. A great quantity of bloody serum seemed to have escaped, and still continued to flow from the mouth and nostrils. The body was much swollen, and the cellular membrane was distended with air; a quantity of serum flowed out on making the several incisions.

About a pound and a half of bloody serum was found in each cavity of the thorax. The pericardium contained about three ounces of fluid. The heart was more than three times its usual size. It was of a deep brown color, and destitute of fat. On examination, the right auricle was greatly increased in capacity, and extremely thin in its walls. The *foramen ovale* was sufficiently open to admit the point of the little finger into the left auricle. The right ventricle was nearly natural, as was also the left auricle. The left ventricle was of an enormous magnitude, and more resembled a large bag than a ventricle of the heart. It was more than three times its natural size, its walls of extreme thinness, and the fleshy columns widely separated from each other. The lungs were more than usually congested with blood; but they, as well as the viscera of the abdomen, were perfectly healthy.

“The above case is interesting in many respects, and among others, in having the *foramen ovale* open, which was, in all probability, produced by the enormous dilatation of the right auricle; it is worthy of remark, that the communication between the right and left auricle existed without producing the disease termed cyanosis or blue skin.”

We have been more than usually liberal in the extracts from this volume, because we were desirous to present the most interesting features of it to the consideration of our brethren. Its analysis has been much curtailed by the general and systematic character of most of the chapters, which necessarily embody much information already known to the profession. Whatever was peculiar or novel, has been carefully transferred to our pages.

We now take leave of Dr. Mackintosh, and it is with sentiments of respect for his talents, his knowledge, and his industry. We have freely expressed our dissent from some of his views, and our disapprobation of certain passages of his work; but to its general merit we are willing to bear our cheerful testimony. It neither deserves, nor will obtain, the standard reputation of the *First Lines*, or of the *Study of Medicine*; but it will be found a useful manual for the pathological student.

ART. II. *An Account of some of the most Important Diseases peculiar to Women.* By ROBERT GOOCH, M. D. London, 1829. 8vo. pp. 432.

FEMALES may be emphatically pronounced to be the arbiters of a physician's fate. According as the opinion which they form of his general abilities and character is favorable or the contrary, and the confidence which they repose in his

practical skill and experience is greater or less, will the result of his career be prosperous or untoward. They are, in fact, best qualified, both by nature and opportunity, to judge of his fitness or unfitness for the active discharge of the duties of his profession. Their perception of character is, in general, nice and acute; their intercourse with him is necessarily most frequent and constant: they can, therefore, best ascertain his possession of those qualities, which are especially requisite at the bedside of the sick, viz. readiness and general accuracy of knowledge, promptness in the application of resources, and tenderness joined to decision and firmness of conduct. Ignorance and audacity, assuming the insidious and bland disposition of the serpent, will sometimes impose upon the unwary; and quacks and pretenders do undoubtedly attain to extensive business, under the patronage of the fair sex, whom they win over by the graces of their person, or the persuasive softness of their address. But these are exceptions to a general rule, and rather tend to prove the influence which even silly females exercise over the destinies of physicians, and the importance of acquiring a pleasing behavior, than the triumph of ignorance over skill and knowledge. These latter, accompanied with the same external advantages, always exercise the most unlimited sway; and, when brought to the test in the hour of danger and of difficulty, drive before them all shallow pretensions and jackdaw exhibitions. If it is important, then, for the physician to win the favor of females by a pleasing and decorous deportment, it is still more so to secure and maintain that favor by the exhibition of the more solid qualifications already enumerated, and, more immediately, by exhibiting a knowledge of those diseases which are peculiar to their sex. No situation can be more trying to a female, than when she finds herself in doubt respecting the ability of her medical attendant to carry her safely through the unknown and severe sufferings she is so frequently destined to experience. Confidence in him leaves to her a composure and calmness, which endow her at once with courage and strength to encounter danger and resist pain. To secure this confidence is therefore the first duty of the humane and judicious physician. This can only be effected, by great assiduity and attention to the sick, and by constant perusal and study of the most experienced and able writers.

Among writers on female diseases the author before us stands entitled to an eminent distinction, both by the soundness of his views, the modest caution with which he advances his opinions, and the extent and value of his experience. As

a writer, too, he enjoys an enviable reputation, which has been richly merited by the simplicity and perspicuity of his style, and the spirit of philosophy and love of letters which breathe through all his writings.

In a preface, written with uncommon vigor and simplicity, Dr. Gooch states the opportunities he has enjoyed for observing the diseases of which he treats, but he does it not with a tone of idle exultation, but with the laudable view to persuade those who come after him to turn their advantages to a good account. We are tempted here to make an extract, by the desire which we deeply cherish, of seeing the younger members of our profession, who may be appointed to public situations in the hospitals, dispensaries, and other infirmaries, follow the counsel and example of our excellent author.

“If I knew a young man placed in such a station, in whose eminence, founded on his professional utility, I felt interest, I would say to him, remember that your station is one that can be enjoyed only by a very few; do not consider it as one of lucrative conspicuousness, but as a trust which Providence has confided to you, and which you will neglect unless you do your utmost to improve your branch of medicine. He who has the care of a lying-in hospital, is a lecturer on midwifery, and is resorted to by the public as an obstetrical physician, has opportunities of acquiring knowledge in, and extending the bounds of, obstetric medicine, which no other physician, surgeon, or general practitioner can possess, whatever may be his talents: your task will go on prosperously, the sooner you have ceased to read, and begun to observe and think; do not, however, attempt to dispense with reading, but dispatch it as speedily as is consistent with accuracy. Keep a note book, read the most esteemed original writers on the most important subjects of your art, and while reading them, note down briefly those points which you wish to remember, so as to have no occasion ever to look into the book again: provided you get the points of the work, the more briefly you do it the better; if you are skilful at this, you will find that a page will hold a pamphlet; and that twenty pages will often hold a bulky volume; if you read German, read Richter's *Bibliothek Chirurgische*, for he is the greatest master of the art of condensed analysis. Thus your manuscript volume will become a *Bibliotheca* of your branch of medicine, and you will never afterwards have occasion to consult the books themselves. There are some writers whom it would be wrong to abandon thus; master-minds, whom we return to again and again, not merely for the knowledge which they contain, but to observe how their minds worked; and the older we grow, the fonder we become of them; such, in England, are Harvey on *Physiology*, and Sydenham on *Medicine*, but few such minds appear in any branch of knowledge; and with most of them, when you have squeezed out the juice, you may safely throw away the rind. Having thus made yourself acquainted with what was known by the most experienced writers on the most

important subjects of your art, you are prepared to undertake the more difficult task of observing and reflecting for yourself: watch cases attentively, and take notes of their important particulars; not of every case, but only of the most important; and not lengthy notes, containing a diffuse description of unimportant trifles, which, from the time which they occupy, will soon cease to be written, and if written, are sure never to be read; but a short description of the leading circumstances, with an equally short mention of the reflections which they suggest. Make yourself perfect in the art of examining dead bodies; accustom your hand to open them, and your eye to detect with accuracy morbid appearances."

The subjects of which Dr. Gooch treats, are as follows:

Chapter I. The peritoneal fever of lying-in women.

Chapter II. The disorders of the mind in lying-in women, together with thoughts on insanity, as an object of moral science.

Chapter III. The mode of distinguishing pregnancy from the diseases which resemble it.

Chapter IV. Polypus of the uterus.

Chapter V. Of the irritable uterus.

Chapter VI. Of some symptoms in children, erroneously attributed to congestion of the brain.

There is also an appendix, in which the author considers the question whether the plague is a contagious disease. The apology he offers for introducing this irrelevant subject, is the probability of his not issuing any publication hereafter.

Peritoneal Fever of Lying-in Women.—Dr. Gooch considers the puerperal or childbed fever an essentially complicated affection, namely, a fever with an affection of the peritoneum. He prefers the name peritoneal fever, because it expresses "the fact that an affection of the peritoneum is an essential accompaniment of the disease, without deciding what that affection is, because it is not uniform." It is remarkable that this disease prevails so much more in certain seasons than in others. It occurs, indeed, sporadically now and then, but the cases are rare and unusually mild. The more prevalent it is, the more dangerous it becomes, the more obstinate and destructive.

Another singularity about the puerperal fever is its occurring chiefly in the practice of one physician, while his colleagues, in the same neighborhood, will meet with few or none. We have known cases of this kind occur, though rarely, in New York. Dr. Gooch relates the case of a practitioner who opened the body of a woman that had died of this affection, and continuing to wear the same clothes seems to have carried the disease to three or four other patients. As soon as he changed his clothes the contagion ceased.

Several other cases to the same effect are related, and if there be no error as to the facts, or none hidden, it would convey an impression that the disease is indeed contagious. This fact being sturdily denied, we must leave it *sub judice*.

Dr. Gooch enters into a detailed history of the disease as traced in the records of medical writers, and as it is not uninteresting, we shall take a rapid survey of their views and practice.

Dr. John Clarke, in 1787, described the disease as occurring in London. It was very fatal; more than two thirds of the patients died. Bleeding, leeches, emetics, bark, and cordials, were all either useless or hurtful. Dr. C. thought that the disease might be occasioned by the purge usually given on the second day; but glysters answered no better. The appearances on dissection were those of inflammation.

Dr. Wm. Hunter thought that three out of four attacked by this disease would die, in spite of any treatment. Richter, on the other hand, says, "I have often seen the childbed fever, and always treated it successfully." He enumerates debility, swelling of the abdomen, colic-like pains, pain in the abdomen on pressure, and pain of the head, as among the symptoms; and the appearances on dissection, inflammation, suppuration, or gangrene in the abdomen. His treatment consisted of a purge two days successively, each to operate three times, and afterwards smaller doses till all the symptoms ceased.

Dr. Lowder, Lecturer at Guy's and St. Thomas's Hospitals thirty years ago, thought that the inflammation was erysipelatous and the fever typhoid. He bled where the inflammation was distinct, but forbore it if the fever was of a low type. In this case bark proved successful.

Dr. Denman, it is well known, was an advocate for early and active bleeding, which he considered not only safe, but absolutely necessary.

Dr. Gordon, of Aberdeen, treated the disease in 1789, and 1792. His essential remedy was bloodletting employed early and freely. He stated that if he took ten or twelve ounces away the patient died; but if he detracted twenty-four, and during the first six hours of the disease, she recovered. He guards practitioners against assuming the pulse as a guide. After bleeding, he gave a bolus of three grains of calomel, and two scruples of jalap, followed by a daily purgative and an opiate every night. Twenty-eight out of seventy-seven patients died.

Mr. Doulcet, one of the physicians to the Hotel Dieu, Paris, treated this disease so successfully, that, in 1782, the Royal

Medical Society of Paris, by order of the government, made a report on his method. He had originally lost a vast number of patients, but was afterwards led to use fifteen grains of ipecacuanha, to be divided into two doses, the one to be given at the moment of attack, if possible; the other an hour and a half afterwards. Vomiting and purging were produced, and the latter was encouraged by a portion made with two ounces of the oil of almonds, one ounce of the syrup of marshmallows, and two grains of Kermes' mineral. Dr. Walsh tried this remedy in England, and pronounced it infallible; and Dr. Denman considers it eminently useful.

Dr. Böer, of Vienna, was also very successful with some one of the antimomial preparations; but he did not divulge which it was.

Dr. Armstrong's views of this disease are well known, as well as his method of treatment. He lost only five cases out of forty-two.

Mr. Hey, of Leeds, son of the celebrated surgeon, saved three cases only out of nineteen before he began to bleed. After he adopted depletion, he only lost two out of thirty-six.

“ It appears to me that symptoms and dissections cannot settle the question, and that Dr. Armstrong lays more stress on the argument than it will bear. Supposing many cases of a disease, which bore in general a striking resemblance to one another in the symptoms and the appearance on dissection; this would naturally suggest as a strong probability that they would all be affected in the same way by the same remedies: but suppose that on applying these remedies to all these cases, with the same activity, at the same stage of the disease, and, as far as can be made out, under the same circumstances, they produced different effects on different cases, some being relieved and recovering, others being made worse and dying; this would be more conclusive evidence of a difference between these cases, than the symptoms and morbid appearances were of their identity. The effects of remedies on a disease, if accurately observed, form the most important part of its history; they are like chemical tests, frequently detecting important differences in objects which previously appeared exactly similar. How many diseases are there in which the symptoms are inadequate guides; in cases apparently syphilitic and apparently similar, some as soon as mercury affects the mouth begin to mend, and rapidly recover; in others, the ulcers begin to spread; and so imperfect are the appearances as guides, that I have known the first surgeons in the profession giving opposite opinions about the same case, and a nose lost from taking the opinion of the majority. The local pains and constitutional disturbance which occur in feeble and bloodless persons, and which are aggravated by bleeding and other evacuants, strikingly resemble the local pains and constitutional disturbance which occur in vigorous and plethoric persons, and

which the lancet and other evacuants relieve and ultimately cure ; yet how many years is it before the young practitioner learns that there are cases apparently so similar yet really so different, and how to distinguish them—and how many practitioners are there who never learn it at all ! Symptoms and dissections can never do more than suggest probabilities about the nature of a disease, and the effects of a remedy on it. A trial of the remedies themselves is the only conclusive proof. Sydenham was so aware of this, that he says, ‘ Epidemic diseases may seem alike to the unwary, because in some sort they do agree to outward appearance ;’ adding this confession, ‘ when a new species of fever arose, I was doubtful how to proceed, and, notwithstanding the utmost caution, could scarce ever preserve one or two of the first patients from danger,’ so far from infallible were symptoms as guides.”

In his remarks on the histories of the disease, Dr. Gooch admits that there it possesses much uniformity—commencing almost always a few days after delivery, marked by pain and tenderness of the belly, and a rapid pulse, terminating fatally within a week, and leaving the depositions and effusions of inflammation. Further than this, the author denies that it is uniform. Independently of the causes, the symptoms, the effects produced by remedies, and the morbid appearances after death, are to be evidenced. Now, there is considerable difference even in the first and third of these particulars, according to the statement of Dr. Armstrong himself. Sometimes the signs of local inflammation are very urgent, at other times they are altogether wanting. Sometimes there is extensive effusion with redness of the peritoneum, at other times it is quite pale. Then, as to the effects of remedies, they differ so materially as at once to destroy all idea of the uniformity of the disease. Dr. Armstrong, however, contends that symptoms during life, and the appearances after death, are infallible guides as to the nature and treatment of the disease. This argument is smartly disputed by Dr. Gooch, who insists that the effects of remedies on a disease, if accurately observed, form the most important part of its history—“ they are like chemical tests, frequently detecting important differences in objects which previously appeared exactly similar.” He instances syphilis and pseudo-syphilis, nervous pains of feeble and bloodless persons, &c., as examples in which symptoms are fallible guides.

PART. II. We now reach the author’s own experience of this affection, which was rendered very ample by his appointment to the Westminster Lying-in Hospital in 1812, and by the infirmity of the elder physician, which caused the whole duty of attendance to devolve on himself for several years.

Symptoms. These were developed a few days after deli-

very, and in general very sudden in their attack. They were diffused pain and tenderness, and swelling of the abdomen; a quick pulse, 120 or 130, generally full and vibrating at first, sometimes small, but still incompressible and hard; the skin was not so hot as in other fevers; the tongue was white and moist; the milk suppressed; sometimes the attack was more gradual; the pain intermitting, and the pulse 80 or 90. As the disease advanced, the abdomen became less painful and more swelled, and the breathing short; the pulse, towards the end, was frequent, 140 or 160, and tremulous; and a clammy sweat covered the skin. Yet the tongue was moist and the mind clear, and death ensued on the fifth day.

On dissection, the intestines were found distended with air, the peritoneum red in several parts, its surface covered with lymph, the intestines adhered to each other, and the omentum to them. Coagulable lymph was deposited in the depressions between the convolutions of the bowels and on the omentum; the cavity of the peritoneum contained several pints of a turbid fluid, serum mixed with lymph. The uterus was sometimes found diseased; its substance infiltrated with pus, and containing small abscesses of the size of a nut; the internal surface ragged and dark.

If the author saw the patient within a few hours after the attack, he could generally arrest the disease, and this was his mode of *treatment*:

A vein was opened in the arm with a wide orifice, that the blood might flow in a full stream, and it was allowed to do so till the patient felt faint. It was then stopped, and her head was raised to keep up the faintness. When this had subsided, she took from ten to twenty grains of calomel in a tea spoonful of arrow root, and afterwards half an ounce of sulphate of magnesia dissolved in beef tea, every other hour, till copious evacuations were produced. From ten to twenty leeches were, at the same time, applied to the tender parts of the abdomen. When these had fallen off, a long and broad bag stuffed with hot poultice, so as to form a cushion an inch thick, was laid hot over the whole abdomen, and renewed often to keep up heat and moisture. If the poultice pressed too heavily, the bag was filled with scalded bran. This application encouraged the bleeding from the leech bites, and also acted as a perpetual fomentation. Dr. Gooch thinks it of consequence to delay the local bleeding, which empties the distended capillaries until the violence of the general circulation has been reduced, otherwise it will fail in its object.

With respect to a second bleeding, the state of the abdo-

men and the pulse were the chief guides. If, after the above active means, reaction ensued, the abdomen was still painful and the pulse incompressible, it was resorted to; but if the pulse was soft, then leeches were preferred, and new relays were put on continually till the soreness had subsided. Calomel and salts, and the bran poultice, were not omitted.

This active treatment should be employed on the first day—later, it is under great disadvantages.

Four highly interesting cases are related, in which the above principles of treatment were fully carried into effect. In the fourth case, the patient had been freely bled three times, and Dr. Gooch found her bleached as white as her pillow, her pulse 150, feeble and tremulous; there was still soreness so that she flinched from pressure. The abdomen, however, was not tympanitic, her breathing was free and her face expressed no anxiety. Opium was administered, and the hot poultice applied to the abdomen. After three doses of the anodyne she slept soundly, and next day her pulse was below 100.

In the lying-in hospital, the practice was not always so successful for several obvious reasons. The constitution of patients is apt to be impaired, their habits are intemperate, and they do not announce their actual condition until it is too late.

All the patients in whom soreness of the gums was produced recovered.

The oil of turpentine did not prove so successful in the hands of Dr. Gooch, as in those of Dr. Brennan of Dublin. Turpentine applied hot, externally, did great service in several cases.

From the above cases, and the experience which he had accumulated up to 1820, Dr. Gooch came to the conclusion that the disease was a fever attended by acute inflammation of the peritoneum; that the inflammatory state was short, soon terminating in a great and irremediable effusion; and that it was curable in the inflammatory stage only by active bleeding and purging, employed during the early hours of the disease. He was destined to experience disappointments, and he relates ten cases which completely set this conclusion at nought.

In the first case, a slow soft pulse attended the disease throughout, though there was a diffused and permanent pain over the abdomen, with tenderness not to be distinguished from the same symptoms when accompanying inflammation, yet they did not depend on that state, as there was no hardness of pulse; and they were relieved without depletion, by fomentations and opium.

In the second case, the difficulty of distinction was still greater than in the first: the pulse, and all the symptoms supposed to indicate inflammation, were present. The previous constitution of the patient, the perfect softness of the pulse, the inflamed appearance of the blood, and the absence of relief after bleeding, led to the successful employment of opiates and fomentations.

The third and fourth cases proved fatal after bleeding. The fourth case was examined after death. The peritoneum was healthy, but pale; and there were one or two ounces of serum in its cavity. Opium, Dr. Gooch thinks, would have relieved those patients.

In the sixth case, the pulse was rapid and feeble; there was immense distension of the abdomen, so as to separate the recti muscles to the distance of two hands breadth; pain and great tenderness there; oppression at the præcordia; dyspnœa. Bleeding was not resorted to; but a purge, and afterwards an opiate, were given. It terminated fatally on the third day after delivery; the labor had been extremely severe. The intestines were found enormously distended with air; *but, in the peritoneum, there was neither redness, adhesion, nor effusion of any kind.*

The seventh, eighth, and tenth cases, are confirmatory of the last—no mark of inflammation having been present in the peritoneum.

Numerous other cases occurred, tending to prove the inefficiency of bleeding. The last case is from Dr. Farre's Journal of Morbid Anatomy, by Mr. Dalrymple, who also furnished the author with a statement of the extent to which bloodletting had been carried in eight cases, all of which proved fatal. The author has thrown it into the form of a table, which we subjoin.

Case	Pulse.	Time of Bleeding.	Quantity.	Appearances of Blood.
1	hard	5 hours	{ 8 ounces, 24 leeches	{ less buffed and cupped than was expected
2	hard	4 hours	42 ounces	
3	quick, but not hard	very early	{ 18 ounces, and leeches	not cupped
4		7 hours	{ bled from arm and leeches	{ neither buffed nor cupped
5	soft		24 ounces	
6	not hard		{ 18 ounces, and leeches	{ neither buffed nor cupped
7	very quick and feeble		very large	
8	quick and feeble			

The last case, related by Mr. Dalrymple, occurred in the wife of a farmer, in whose dairy a number of cows, after calving, had been seized with a disease similar to puerperal fever, and who had paid great attention to the sick animals.

During the last autumn and winter, (1828-9,) twenty-eight cases of peritoneal fever occurred in the Westminster Lying-in Hospital, of whom seven died. A large proportion of these were cured at once by ten grains of the compound powder of ipecacuanha every three or four hours, for three doses, and a hot linseed poultice over the whole abdomen. Leeches would always remove the soreness. As soon as the violence of the symptoms was subdued, a mild purge was administered. In those cases in which the lancet was employed, its effect was discouraging: the patients fainting after losing a few ounces, the blood bearing no marks of inflammation, and greater exhaustion following its use. The experience, therefore, of Dr. Fergusson, who is the physician to this institution, confirms that of Dr. Gooch, who appears to have used bloodletting boldly and freely, and with great success, up to 1820; but, from that year down to the present, with none whatever.

The last case, related by Dr. G., is an interesting one, and we shall therefore present an abstract of its symptoms, as well as of its post mortem appearances.

CASE XV. Mrs. — had had, after a former lying-in, a loosening of the bones of the pelvis, which caused long suffering, but from which she had recovered, and was well at the time of her present labor. On the day after her delivery, she was seized, about two in the afternoon, with shivering, followed by a dry heat, quickened circulation, and pain over the abdomen. *A purgative was given, which operated fifteen times.** The next day at two, she had another shivering, and became feverish. Opiates and aperients were given, and the pain subsided, but she never felt easy in the abdomen. On the fourth day, she had pain in the head, to which leeches were applied; and afterwards six ounces of blood were drawn from the arm. On the fifth day there arose new symptoms of pain and tenderness of the abdomen, also in the sacrum. The pulse was 120 and hard, so that fourteen ounces of blood were drawn. At this time Dr. G. first saw her. The pain and tenderness were still so severe in the right iliac region, that the patient could not breathe without exclamations of suffering. The uterus was large

* Had this active purgation any influence in exciting disease in parts already predisposed and irritated by preceding labor?

and tender, the abdomen soft and without tension. There was no milk in the breasts; the lochia were scanty; the pulse soft, and 120; bowels free. *Twelve leeches to the abdomen; linseed meal poultice*; and when leech bites had stopped, *fourteen more leeches*. *Twenty drops of the sedative solution of opium; calomel gr. ij. every two hours; and five grains of Dover's powder every six hours*. The next day all the symptoms were better, except the pulse, which was still 120. *Salts and senna* were given, to open the bowels, and *Dover's powder* discontinued. At night she was not so well; her cheek was flushed; great heat and perspiration; her mind became confused; there was excessive flatulence, and the abdomen was tympanitic; pulse 116; gums sore, and tongue swollen. *Turpentine and castor oil*. Next day, much worse; pulse 128; flatulence; death.

Post Mortem Appearances. Putrefaction had made great strides. The intestines were immensely distended with air. The peritoneum was not red, nor did it adhere. In the lower part of the abdomen, there were three ounces of a bloody transparent fluid. In both ovaries, the internal glandular structure was destroyed, leaving a hollow capsule. The fallopian tubes contained pus at the fimbriated extremity. The colon was healthy. The joints of the pelvis contained a bloody fluid.

The author indulges in various reflections on this case, which we shall not repeat, as we think every reader competent to form his own conclusions.

From all the foregoing facts, Dr. Gooch infers, that there is a form of peritoneal fever, different from that which has inflammation for its principal characteristic, and which is relieved by prompt and active depletion. It is also different in its duration, which is much shorter; and lastly, in the morbid appearances it presents after death.

The great object in all cases must be to ensure a sight of the patient, as early after the attack as possible. The next is to be with the patients constantly, and watch every change of symptoms; and, lastly, the treatment must be undertaken with the impression that all cases do not depend on one and the same state, neither do they demand one and the same treatment.

The remedies for the efficacy of which there is the strongest evidence on record, are, 1st, bleeding and purging; 2d, emetic doses of ipecacuanha; 3d, opiates internally, and poultices externally; 4th, mercury so as to affect the constitution; 5th, oil of turpentine. Might not the author have added a sixth division in which two or more of these are combined?

The author concludes with some very judicious remarks on each one of the above divisions; but as their import has been pretty fully anticipated in the previous part of this work, we need not be delayed by them.

CHAP. II. *Disorders of the Mind in Lying-in Women.*—There are two periods, at which, chiefly, the mind may become disordered. The one is soon after delivery; the other several months afterwards. Instead of a general description of the disorder, the author details several interesting cases. As there is nothing peculiar in them, except the period in which they occurred, we shall not dwell on them. The following extract will convey more important information.

“There can be no doubt that a very large proportion of cases of disordered mind in lying-in women and nurses ultimately recover, but it is equally certain that some of them die, and there are two modes of calculating the probability of death in any individual case; the one is to ascertain the proportion of deaths to recoveries in as large a number of cases as possible, the other is to endeavor to discover some symptoms, the absence or presence of which indicates safety or danger. As to the former of these modes, it is very difficult to procure trustworthy information. M. Esquirol, of Paris, has given an account of ninety-two patients in the Salpêtrière who had become deranged while lying-in or nursing. Of these, six died, that is, one in fifteen; but this estimate must give the mortality in chronic cases rather than recent ones. Dr. Burrows has published a table of fifty-seven cases, of which ten died; this is a mortality of more than one in six. The best mode of forming an estimate of the mortality of this disease, would be to procure statements from a great number of practitioners extensively employed in the practice of midwifery, of how many cases of puerperal insanity they had met with in their practice, and of these how many had died. This would be the best mode, although none but those who have tried to procure information in this way, can have a notion of the difficulty of procuring answers scrupulously accurate. But however accurate the estimate may be, it must afford a very loose prognosis for any particular case. To a question about the probable fate of a patient, it would be a vague answer to say that the mortality is as one in fifteen. It would be more like the opinion of the actuary of an insurance office than of a practical physician. The question would naturally occur, are there no symptoms in this as in other diseases by which to judge whether or no the life of the patient is in danger?”

The answer of the author to the last question, is drawn from an observation made by Dr. Wm. Hunter, in his lectures, and supported by his own experience; that there are two forms of puerperal mania, the one attended by fever, or a rapid pulse—the other by a very moderately excited circu-

lation. The latter cases recover; the former generally prove fatal.

Mania, soon after delivery, is more dangerous than melancholia some months afterwards. Nights passed in sleep, a slow and firm pulse, are favorable.

“In the cases which I have seen terminate fatally, the patient has died with symptoms of exhaustion, not with those of oppressed brain, excepting only one case.”

A prognosis of the duration of the disease is difficult, and little light has yet been thrown upon it.

The author next starts a question, whether a patient who has been disordered in the mind after one lying-in, is likely to be after another? The proportion of cases in which the disease has occurred twice, is very small. Great care should, however, be taken to prevent it.

Etiology. A large proportion of the cases seen by Dr. Gooch, occurred in persons, in whose families disorder of the mind had previously appeared. The patients were of susceptible dispositions, nervous, remarkable for those peculiarities which distinguish the sexes, suffering by the depressing passions, or suddenly assailed by mental agitation. In some, no such causes existed. The only one here inferred, is the peculiar susceptibility of lying-in women. This cause has been deemed unsatisfactory; but so might every other predisposing cause. Disordered digestion, and weaning, have also been supposed to produce this disease. The first, the author admits; the second, he doubts.

Pathology. Dr. Gooch is not inclined, with the populace, and he might have added, many scientific physicians, to attribute all afflictions of the mind to inflammation of the brain, and suppression of the lochia. The following is his own view.

“Experience and reflection lead to very different conclusions; they teach us that a disorder of the mind may be connected with very opposite states of the circulation; sometimes with inflammation or active congestion, for which depletion is the shortest and surest remedy; sometimes with an opposite condition of the circulation, which depletion will only aggravate.

“Cerebral excitement does not necessarily depend on inflammation or congestion, nor is depletion, however moderate, necessarily the proper remedy. Cerebral excitement is often aggravated by depletion; and, in some cases, as I shall have occasion to relate, absolutely brought on by it. Now, the question, what is the morbid state of organization on which puerperal insanity depends, must be determined in the usual way. There is only one safe mode of working the problem, by observing the causes which brought on the disease, the bodily symptoms which accompany it,

the way in which it is affected by remedies, and the morbid appearances discovered after death. These points can be learned only by an attentive and thoughtful observation of cases, and will be best communicated by the relation of them."

From the cases adduced in corroboration of this view, we shall select the following :

"Mrs. — was delivered of her first child after a natural labor, attended, however, by rather more than the usual loss of blood. From the first her manner appears to have been excited and unnatural. Her nights became restless, her mind more excited, and about three weeks after her delivery she became maniacal. Her pulse was 140 before any active remedy was employed. She was put upon low diet, leeches were applied to the head, and she was freely purged with calomel and castor oil. The symptoms not abating, and the patient becoming very violent, a cupper was sent for, who took ten ounces of blood from the head by cupping glasses, and the following morning I saw her for the first time. She was sitting up in bed in a straight waistcoat. Whatever was asked her she did not answer, but repeated it like an echo. 'Have you any headache?'—'have you any headache?' 'Put out your tongue'—'put out your tongue.' She would not say any thing else. Her tongue was moist and pale—her pulse was between 120 and 130, small and weak—her bowels had been lately freely moved—her skin was not hot, her face was very pale—she had had no sleep for many nights. This being the state of things, I thought it a great object to procure repose. She therefore took twenty minims of the sedative solution of opium, and ten minims in a two ounce glyster every six hours. This procured six hours of uninterrupted sleep, and when awake she was more herself. Some symptoms led her attendant to employ another bleeding by ten leeches to the head, which was shaved, and a blister applied to the crown. When I saw her two days after my first visit, she had had in the night several hours of sleep, and was so much better in mind, that her friends were surprized when I told them that she was not out of danger. Her face was very pale, and her pulse so quick, small, feeble, and fluttering, that I remarked to her medical attendants that she would not bear the loss of another ounce of blood. It was agreed that she should continue her small opiate glysters, and that care should be taken to supply her with sufficient nutriment; but the next day the symptoms of exhaustion became more alarming, and when one of her medical attendants visited her in the evening, he found her pale, cold, breathing only at long intervals, and with scarcely any pulse—she died that night. The body was opened the next day by two very experienced anatomists. The veins throughout the body were remarkably empty—the heart contained little blood—the lungs and liver were singularly pale. Within the head there was the same deficiency of blood in the veins of the pia mater, and in the sinuses—under the arachnoid membrane was a little serum. On slicing off the hemispheres, the bloody points were unusually numerous."

On this, and other cases of a similar nature, the author builds a long train of reasoning, to prove that the puerperal mania is a disease of excitement without power, requiring soothing and nourishing treatment, rather than antiphlogistic measures, which he maintains to be injurious.

Treatment. The first rule laid down is, that the attendants on the patient should be such as will control her mildly, but effectually; and who are not too nearly related to her. Relatives, in fact, ought not to be admitted to her, especially her husband.

The second regards the diet, which ought not to be very low, but consist of nutritious and unheating fluids, as gruel, milk, veal broth, &c. It may be necessary in some cases to lower this diet, but the majority of cases will even require wine and meat.

The third rule relates to medicinal agents. These are, 1st, venesection; 2d, emetics and purgatives; 3d, anodynes; 4th, tonics and stimulants. A selection is of course to be made, adapted to each individual case. The presence of fever, is the only indication for the first means, which is generally injurious.

The fourth rule indicates seclusion, and control of the patient.

We pass over the remarks "on insanity, considered as an object of moral science," because it has no immediate practical reference to the subjects under consideration.

The *third* chapter treats of the mode of distinguishing pregnancy from the diseases which resemble it. It is an useful and practical essay, full of information to the student; but as it does not present any novelty, we shall not be detained by it.

Chapter *fourth* is likewise an elementary treatise, and treats systematically of polypus of the uterus.

CHAP. V. *Of the Irritable Uterus.*—We believe that Dr. Gooch is the first author who has called the attention of the medical world to this interesting disease, and we shall therefore attempt to make his views of it as fully known as our limits will permit.

By the irritable uterus is understood "a painful and tender state of that organ, neither attended by, nor tending to produce, change in its structure." The author has met with it repeatedly during the last twenty years, and at first mistook it for chronic inflammation. But although he found it obstinate and intractable, he is satisfied that it produces no disorganization appreciable during life. The pain it occasions is different from that of dysmenorrhea, which occurs

only during the menstrual period, and is quite absent at other times; or from that of prolapsus uteri, which is relieved by the horizontal posture, and by the replacement of the organ; or, lastly, from that of diseased structure, of which the existence may be ascertained by examination.

The pain from the irritable uterus, is felt in the lowest part of the abdomen, along the brim of the pelvis, and often in the loins. It is greatest during exercise, and in the horizontal posture; it does not, however, cease in the latter condition, as it would in prolapsus uteri. On examination, the uterus is found very tender; the vagina is insensible to the touch; but the moment the womb is felt, exquisite pain is the consequence; and this lasts several hours after the examination, as in the irritable tumor of the breast, described by sir Astley Cooper. This pain varies at different times. The uterus feels perfectly natural; there is no appearance of scirrhus. The pain comes on in paroxysms, and distresses the patient, although she indulges in a reclining position. The general circulation is undisturbed; the pulse is soft, and not much quicker than natural, but is easily quickened by the slightest emotion. The general health is variously reduced; in delicate constitutions, it will be the most affected. The function of digestion is impaired; the bowels require aperients, but an active purge is sure to occasion a paroxysm of pain.

The causes are extraordinary bodily exertions, at times when the uterus is in a susceptible state. In one patient it came on after an 'enormous' walk, during menstruation; in another it was occasioned by the lady's going out a shooting with her husband, not many days after an abortion; others, by standing long at concerts; matrimony, &c. All these patients were predisposed by mental and corporeal sensitiveness. Its continuance leads very naturally to serious apprehensions of diseased structure; but frequent examinations betray nothing except tenderness and slight swelling, or rather tension; neither does the disease terminate in disorganization. Entire recovery will take place after years. Amendment is always slow, and subject to frequent relapses.

What is this disease? The only answer which our author attempts is, that it is a disease of irritation, similar to that which affects other parts, such as the breast; of which we gave a full account in our last number, in the analysis of sir Astley Cooper's work; or of the joints, of which Mr. Brodie has written an excellent description. This gentleman considered this latter affection to depend on a morbid condition

of the nerves, and regarded it as a local hysterical affection. The irritable testicle, too, falls perhaps under this class.

Treatment. The object is first to subdue pain; secondly, to restore the general health. The remedies for the former object are, the horizontal posture, narcotics, the warm hip bath, occasional local bleeding, to which may be added mercury and counterirritants. Where the pain is constant, equal repose should be enjoined. The patient must be taught to write, read, work, &c. in a position on the sofa, so that her shoulders are as low as her pelvis. This posture must, however tedious, be submitted to, not only till all the pain hath ceased, but for some time afterwards.

Bloodletting. When the general circulation is unaffected, local will be preferable to general bleeding. Cupping gives more decided relief than leeches. The cups should be applied to the upper part of the sacrum, or to the part in which the pain is felt. Leeches to the hemorrhoidal vessels, or to the labia, will also give relief. The quantity drawn must be regulated by the strength, the duration of the disease, and the relief afforded; when the strength has been exhausted by the long continuance of the disorder, the measure should be moderate. Four ounces have sometimes proved eminently serviceable. The pain, if diminished, will increase again, and return if removed. To anticipate and prevent this, the bleeding should be repeated, but not so largely as at first.

Narcotics. The best preparation of this class to be prescribed, is, one third camphor, and two thirds extract of henbane, or hemlock, or poppy, divided into pills of five grains, of which one may be taken twice or thrice a day; or about ten grains of the extract of poppy, dissolved in one ounce of gruel, may be injected into the rectum daily, after the bowels have acted. This may be repeated, and should always be replaced, if discharged. *Laxatives* will be necessary, as want of exercise, and narcotics, will induce confinement of the bowels. Any mild aperient, as castor oil, Epsom salts in infusion of roses, &c. will answer.

The warm hip bath, at the temperature of 96° per half an hour, every or every other night, is very useful sometimes. The partial steam bath may be used with benefit every other day.

Mercury. A mild course of this alterative, in the form of blue pill, or calomel mixed with henbane continued for weeks every other night, has sometimes, without affecting the gums, kept the bowels open, and overcome the pain, and even prevented its recurrence. This has been its effect in sound constitutions, and during the early period of the dis-

ease. Debilitated frames are injured by it, even if the local disease is relieved. These observations on mercury are curious, as the general impression has been that, in diseases of irritation, this medicine invariably does harm. Its value has been tested by Mr. Fernandez, of London, who first induced our author to employ it. This gentleman also cupped in recent cases to faintness, and with good effect.

External Irritants. Small blisters often renewed, a caustic issue on the sacrum, have proved advantageous sometimes. In very sensitive constitutions they are to be avoided.

All the above remedies may be safely used, except bleeding and mercury, about which too much caution cannot be enjoined. "It is a good rule," observes Dr. Gooch, "in the treatment of all diseases, whether acute or chronic, when the remedies are affording little relief, when the constitution, rather than the disease, seems to be yielding under them, to desist from them." Where there is no congestion, bleeding will do harm.

Tonics. When the disease has lasted long, and is not relieved by the means already detailed, is accompanied by impaired health, cold extremities, and a pale complexion, chalybeates will be proper and useful.

The result of the author's treatment has been, that some who had been ill for several years, recovered after a few months, by simply avoiding the exciting causes. Others have relapsed by laying aside this caution; and in some cases, the best efforts have alleviated, not removed, the disease. There are fewer cases occurring of this hopeless condition now, than formerly. Dr. G. mentions as important, that in the cases which remained uncured after several years, the patients had, for the relief of their pain, accustomed themselves gradually to a daily enormous allowance of opium.

The last chapter is a valuable one, and treats "of some diseases in children erroneously attributed to congestion of the brain." As it is not connected with the subject of this volume, we have preferred making a pretty large extract from it in our foreign selections. It will furnish useful hints, and amply repay perusal.

MEDICAL EXTRACTS.

NO. III.

Medical Profession in Berlin.—The medical students in the German universities, form more than one fourth part of the whole number. In 1825, the whole number of students was between sixteen and seventeen thousand, at least five thousand of whom belonged to this department. Such an army of doctors issuing forth every three years from those institutions, would be terrifying to any nation but the Germans. It is to a considerable extent the custom in this country, for each family to have its family physician, who calls every two or three weeks to ascertain the state of their health, in order to anticipate disease. At the end of the year he receives a present from the family for this service, proportioned to their means and liberality. Besides this, he has separate fees for visiting them when sent for. The fees of the physicians are regulated by an ordinance of the government of the cities. In Berlin, it is about seventy-five cents for the first, and fifty for every subsequent visit, though foreigners are expected to quadruple it. Considering their ability, for they are as a body perhaps surpassed by those of no other city of its size, they certainly work much more reasonably, than any other class of professional men within my knowledge.

All German governments support the medical department of the universities very liberally. They are very well provided with cabinets of anatomy, of mineralogy, and with botanical gardens. Here, as well as in some other countries of Germany, there is 'a minister for religion, education, and medical affairs.' As the medical department does not in the remotest degree interfere with politics, it is thought worthy of peculiar patronage. No individual is allowed to receive the title of M. D., until he has completed his three years' course at one of the universities. In Prussia, every student must repair to Berlin before he is permitted to practice, where he is minutely examined by a medical committee, and unless he is pronounced well qualified, he must return to the university and continue his studies. The advantages for acquiring a complete education are so numerous, and the hospitals are so extensive in the large cities, that no one can fail of becoming a good theoretical and practical physician, if he has a moderate share of talents and industry. The Prussians, and in truth all the northern Germans, pride themselves not a little on the talents and attainments of their medical

professors. In reputation, the medical faculty is not surpassed by any of the other three. They display the same general knowledge of their professions as gentlemen of other departments, and are to a very considerable degree familiar with the past and present state of their science in Europe, and in our own country. I have seen on the table of a physician, the medical journals of Boston, New York, and Philadelphia, Silliman's Journal of Science, the North American Review, &c., with many of the periodicals of Paris, London, and other cities of Europe. Several of their physicians have conversed with me respecting Messrs. Physic, Chapman, Hosack, Post, Warren, and other eminent physicians of our country, more in the manner of Americans familiar with the reputation of these gentlemen, than as residents of the centre of Europe.—*H. E. Dwight's Travels in the North of Germany.*

Diseases, and Statistical Tables.—In the bill of mortality for the past year, the number of deaths is stated at 6426, or somewhat over 123 weekly. If this is compared with the mortality of our cities, it will be found, if I mistake not, much in our favor. Berlin now contains about 200,000 inhabitants, not varying one or two thousand more or less. As our seaports are the constant resort of strangers, the number of deaths is probably increased by some hundreds, which ought to be deducted to put them on a just scale of measurement. Of the 6426 who have died, 3222, or more than half, were under ten years of age. Here we have greatly the advantage, as one half of the population in the United States arrives to the age of twenty, and in our cities to at least the age of fifteen. I cannot account for this mortality among children. The climate is much less variable than with us, and our extremes of temperature, though sometimes almost equalled here, are never surpassed. It may be partially owing to the moisture of their winter and spring, and possibly to the fact that houses are not so impervious to the air as those of our northern cities. This last circumstance, judging at least by one's comfort, seems to be more than counterbalanced by their stoves, which diffuse an equal temperature throughout the room. We have almost universally carpets; here they exist only in the houses of the rich. Even with this comfort, and the superiority of our houses, the temperature of our rooms is not equally agreeable. The cause of our less frequent mortality is probably found in our manner of living. The poorer class of the inhabitants of our cities are better clad than those of this town, and almost without exception have sufficient food. Here the indigent are unable to procure meat oftener than once or twice a week, and sometimes not once a month. Though the expense of living here is less than at Paris, in proportion to the price of labor, it is twice as great as in our own cities.

The diseases prevailing here generally correspond with those found in the United States; but they prevail in different proportions. In Boston, one fourth, and in some years almost one third; in New York, one fifth; and in Philadelphia, one sixth, of the deaths are of consumption. In this city there were but 416, or one in fifteen and a half, who died of that disease. This may be accounted for

from the greater variableness of our climate, and the comparatively small number of sudden and violent changes of the weather in Prussia; and probably still more from the fact that the Prussian girls have more common sense in their toilette than those of our cities, and rarely wear the dress of summer when the thermometer is below the point of congelation.

Of cramp or spasms, (*krampfen*,) 1091, or more than one sixth, died. Of these 837 were under one, and only 68 over ten years of age. This is a much greater proportion than with us.

Of dropsy, the deaths were 435; of whom 77 were of dropsy in the head, and 101 of dropsy in the breast. This number, if I mistake not, is several times as great as in our cities. There is nothing in the German mode of living to produce this effect, except the prodigious quantity of beer which they drink. This, I have no doubt, has not a little influence.

Of *schlagfluss*, apoplexy, and *stickfluss*, or croup, there were 558 deaths. There were 512 who died of debility and old age; 157 of feebleness soon after birth; 75 by accident, of whom 27 were drowned in the Spree; and 252 of teething.

Of wasting or consuming fevers, *abzehrenden febern*, 1076 died; of nervous fevers, 164; of scarlet fever, 108; and of inflammatory fevers, 473, of which 162 were on the lungs. Of childbed, and the fevers which succeed, 47 died.

The remaining deaths were, of whooping cough, 52; smallpox, 7; measles, 60; quinsy, 81; *blustiurz*, or hemorrhage, 34; cancers, 57, of which 48 were women; and suicide 47—10 women and 37 men, &c. &c. The deaths by suicide in 1824, were 57, or ten more than during the present year. Notwithstanding the *Schwärmerey* of the Germans, this is not so great a proportion as in Paris, and I believe a much smaller than in London. It is a singular fact, that the greatest number of suicides occurred during the brilliant month of May. Nine terminated their existence during this month, only one in February, and one in the gloomy month of November. The Germans in this respect are the reverse of the English; for whom November is proverbially the month to hang, shoot, and drown themselves.

The following is a list of the deaths and births of Prussia during eight years, from 1817 to 1824 inclusive.

	<i>Births.</i>	<i>Deaths.</i>
1817, - - -	454,600	307,000
1818, - - -	463,554	313,755
1819, - - -	492,799	334,438
1820, - - -	484,936	297,284
1821, - - -	504,160	287,573
1822, - - -	502,925	314,513
1823, - - -	498,643	318,878
1824, - - -	505,238	318,457

Total, 3,906,855 2,491,898

The number of births and deaths in France between 1817 and 1824 inclusive, was as follows :

	<i>Births.</i>	<i>Deaths.</i>
1817, - - -	944,125 - - -	748,223
1818, - - -	913,855 - - -	751,907
1819, - - -	987,918 - - -	788,055
1820, - - -	958,933 - - -	770,706
1821, - - -	963,358 - - -	751,214
1822, - - -	972,796 - - -	774,162
1823, - - -	964,021 - - -	742,735
1824, - - -	984,152 - - -	763,606
Total,	7,689,158	6,090,608

From this statement, you will perceive that the number of births in France in eight years, amounted to 7,689,158. During the same time they amounted in Prussia to 3,906,858. France has a population of nearly 32,000,000, while that of Prussia in 1825 amounted to 12,003,810. Prussia, with rather more than a third of the population of France, had, during these eight years, more than half as many births as the latter country. This great difference is a striking exhibition of the comparative elevation of the lower classes in this country.

From this statement it will appear, that during these eight years, the number of births exceeded that of deaths 1,414,880, or they were also in the ratio of five to three. This, for a European country, is a great excess, and for one laboring under such heavy taxes as Prussia, is a favorable exhibition of the industry of the nation.

Of the 2,491,978 deaths in this country during these eight years, there were 7155 of suicide, almost 900 yearly, or about 29 in 10,000 deaths. Of the suicides in France during this period I am ignorant. There were, however, in the city of Paris during these eight years, from 1817 to 1824 inclusive, 2808, (vid. *Berlinische Nachrichten*.) From this statement, however, it is impossible to form a comparison, as Paris, being the metropolis of misery, as well as of splendor, the proportional number of suicides is much greater there than in the provinces.*

During these eight years, 37,633 died in Prussia of accidental death, or 4704 annually. In every 10,000 deaths, those caused by accident were 151. During this period, 18,051 died of the small-pox, principally in the provinces of Silesia and Posen. In every 10,000 deaths, 72 were of this disease. There were during these years 123,958 born dead, or more than 15,000 yearly; that is, in every 10,000 deaths, 497. 35,608 were born where the mother died, or 451 yearly, or 143 in 10,000 deaths. All unlucky deaths, viz. those by accident, misfortune, violence, &c., amounted to 222,440, or 22,805 yearly, or in 10,000—892.

The number of births in Berlin during the year 1825, was 8033, of which there were twins in 95 instances. The births exceeded

* I have no account of the illegitimate births of Prussia during this period. There were, however, in France during the eight years, from 1817 to 1824, 272,040 boys, and 259,144 girls, or a total of 531,184 illegitimate births, or one in every 14½ births in all France was illegitimate.

the deaths by 1607. The average number of daily births was 22; of deaths 18. There were 502 births and 40 deaths more than in the previous year. In 1825, there were 2126 couples married. In 1824 there were 1801 marriages, giving an excess of 325 in favor of the last year. Of 6426 deaths, 599, or about one eleventh, were over seventy years. During this year, 331 were born dead, that is, one twenty-fourth of the births, and one nineteenth of the deaths were of this class. Among the legitimate births, one twenty-sixth part were thus born, and among the illegitimate, one in ten.—*Ib.*

Lunatic Asylum of Pirna.—At Pirna, is one of the principal lunatic asylums of Saxony. For neatness and discipline it is excelled by few on the continent. The patients are about one hundred and thirty in number, two thirds of whom are men. Most of the females, as the attending physician informed me, had lost their reason from disappointed love. As this passion is said to be more deep and lasting in Germany than in any other country on the continent, it is not perhaps surprizing that it has thus affected the minds of so large a proportion of the sufferers. Here is a machine designed to lessen the pressure of blood on the brain. A platform, in the form of a bed, is attached to a cylinder, which, by means of wheels and ropes, is made to revolve with greater or less rapidity. The patient is placed upon this, with his feet at the extremity. A rapid revolution gives a far more accelerated motion to the feet than the head, and causes the blood to fly to the former. In most cases, this motion affords the patient great relief. In those which are very violent, they resort to baths, of which there is a great variety. In some, the water is thrown from a tube, the size of the stream being lessened or increased at pleasure. If this produces no effect, the invalid is made to sit up in the bath, when several large buckets of water are dashed upon his head. The electrical shock of this element, coming as it sometimes does from the height of ten feet, has in every instance afforded some relief. This violent shock is always succeeded by an agreeable sensation, and for a time the patient is easily governed. Most of the persons in this asylum are deranged but on one subject; on all others they are perfectly rational.—*Ib.*

Blumenbach on Snow Ophthalmia.—Xenophon, in his account of the expedition of the younger Cyrus, relates, that when the Grecian army was crossing the snowy mountains of Armenia, between the Euphrates and Phasis, in the middle of winter, (which answers to the beginning of January, according to our present mode of dividing time,) many of the soldiers were blinded by the insupportable brightness of the snow; and that, with the intention of preventing or curing this annoying affection, they bound something black (μελαν τι) before their eyes.*

It appears that this snow ophthalmia, of which we sometimes see examples even among ourselves in the winter season, is endemic

* iv. 5. p. 294. 4th ed. of Hutchinson, Camb. 1785.

in alpine and northern countries; so that the Laplanders, when returning from the chase of the wild reindeer, are for some days almost entirely destitute of sight.* The Greenlanders are affected with this disease of the eyes chiefly in the months of May and June, and if it continue longer, they attempt its cure by making an incision in the skin of the upper eyelid.† The Esquimaux labor under this ophthalmia, more especially when the surface of the snow, which covers the ground on all sides, has been partially melted, and again, by the action of the frost, converted into a solid crust. To the incapability of bearing light, there is at first joined a disagreeable sensation, as if grains of sand had fallen into the eyes, which, as the disease advances, increases so as to resemble the effect of the strongest sternutatory powder, and they are seized at the same time with a very violent tonic blepharospasmus. These affections sometimes, though rarely, disappear in ten days; but not unfrequently they remain for four weeks.‡

Of the mechanical remedies used by the savages to prevent this blindness, which results from an intense glare of light reflected from the snow, I may mention two which happen to be at hand; one of them is of the same kind as that mentioned by Xenophon, and is at the present day much in use in those northern countries—something black, which is stretched before the eyes; that is, a sort of net work or gauze, made of horse hair, a little convex anteriorly, lest it should impede the free motion of the eyelids. There is a specimen of this preventive machine among the curiosities of our academic museum, presented by M. de Asch, to whom I am indebted for innumerable articles supplied to my collection of natural objects, with a note attached, signifying that it is used among the Tartars, especially when hunting or travelling in winter, and that it is called in their language *kaar yoeslik*, which means *eye bandage*.§

The other of these machines is constructed on a very different plan, by the Esquimaux, on the coast of Labrador. Although we find many things related by Ellis, Crantz, and other authors who have visited those eastern shores of America, regarding the wonderful sagacity with which the Greenlanders and Esquimaux construct their snow spectacles, or *snow eyes*, as they call them; yet, as they seemed to be neither very accurate nor clear, I applied to one of the missionaries that he might give me a correct account of the matter, in as far as regarded the part of the country in which the colonies of his brethren had been established. This benevolent man afforded me the necessary information, and moreover sent me a specimen of those spectacles, made by the Esquimaux themselves of the colony of Hoffenthal, on the Labrador coast, and

* Kaud Leem, on the Laplanders of Finmark, p. 52.

† Crantz, *Histoire von Groenland*, v. i. p. 297.

‡ Cartwright's 'Journal during a residence of nearly sixteen years on the coast of Labrador,' vol. i. p. 102.

§ Concerning a similar apparatus used by the Persians for preventing the snow ophthalmia, see Chardin's *Travels*, vol. i. p. 211; and Bell of Antermomy's *Travels*, vol. i. p. 84.

which, both with respect to simplicity of design, and accuracy of adaptation to the end in view, testifies the great ingenuity and acuteness of these savages, in alleviating the inconveniences of their mode of life.

A few words will suffice to illustrate the figures by which this machine is represented. It is made of a very smooth wooden substance, like poplar, of that remarkable, and, in as far as regards its origin, as yet enigmatical, kind, which is driven upon the northern shores of the globe. The posterior surface which covers the nose is pretty deeply cut, to prevent it obstructing the free motion of the eye. There is a notch cut on each side, at the lower margin, which is applied to the cheeks, and which is scarcely subservient to any other purpose than to afford a passage to the tears, which are rapidly secreted in an inflamed eye. The upper margin of the fore side is more prominent than the under, so as to protect the eye from the snow, or act as a shade in keeping off the sun's rays. The other side is blackened with soot, so as to absorb a part of the dazzling light. Lastly, the apertures made for vision are in the form of narrow slits, and so placed as to correspond with the eye, having the lids nearly closed. I have of late, unfortunately, had occasion to try this machine, being troubled with a severe and obstinate tonic blepharospasmus, which has continued for several months; and when it was necessary for me to look minutely at anatomical preparations, or other natural objects, in a clear light, I have found nothing of equal assistance, or so convenient, as these Esquimaux spectacles of which we speak. Moreover, what all have testified, who, seeing this machine in my museum, have made trial of it—it answers the purpose of a telescope; and Ellis says, that the savages just mentioned, although they are less dazzled by the brightness of the snow, apply it to their eyes only with the view of observing remote objects more distinctly.*—*Edinburgh Philosophical Journal*, vol. 8.

Method of Bloodletting in the Shetland Islands.—In Shetland, there are several native popular remedies. Scurvy grass, for instance, is used in cutaneous complaints; buttermilk in dropsy; the shells of whelks calcined and pounded, for dyspepsia; and a variety of steatite, named in the country, *kleber*, for excoriations. But the mode for letting blood, known from time immemorial, deserves the most particular notice. When the native surgeon is called in, he first bathes the part from which the detraction is to be made with warm water, and then draws forth his cupping machine, which consists of nothing more than the upper part of a ram's horn, perforated at the top, and bound round with a soft piece of cotton or woollen rag. In applying it to the skin, he sucks out a little of the included air, takes off the horn, makes upon the part that has been thus gently raised six or seven slight incisions, again fixes the cupping instrument, freely draws out the air by the reapplication of his lips to it, and either by insinuating his tongue within the perforation,

or by twisting round it a piece of leather or bladder, prevents the ingress of fresh air. He next uses coarse cloths, wrung out with warm water, to stimulate the flowing of the blood; and when the horn is half filled, it leaves the skin and falls down. The same process is repeated several times, until a sufficient depletion has been made. It is worthy of remark, that the African negroes, described by Park, have a similar mode of cupping.—*Dr. Hibbert's Description of the Shetland Islands.*

On the Difference between Sea and Land Air.—Having learned that, on the Baltic, asthmatic invalids were much better at sea than on the shore, M. Vogel analyzed the air a league from the shore, and concluded 1st, that the air above the Baltic, a league from the shore, contains less carbonic acid than the ordinary atmosphere, and carbonic acid probably diminishes as we recede from land; and 2d, that the same air contains muriates in greater or lesser quantities.—*Edinburgh Philosophical Journal, No. 12.*

QUARTERLY INTELLIGENCE.

FOREIGN.

ANATOMY AND PHYSIOLOGY.

Case in which no Division existed between the Ventricles of the Heart.—A case of this kind is related by Dr. Wittchke, in Hufeland and Osann's Journal for April, 1828.

The patient was twenty-four years of age; had from his infancy been affected with a peculiar palpitation of the heart, unattended by any other symptom of disease. Five years ago, after an inflammation of the chest, the palpitation augmented in violence; he appeared sometimes to be in danger of suffocation. The palpitation and sense of suffocation abated when he sat upright, and pressed his breast firmly against any hard body. Medical treatment rendered him no relief; the occurrence of hemorrhoids appeared, however, in some measure to render his sufferings more tolerable. Finally, the accessions of suffocation became more violent, particularly at night; the only position in which the patient could find any ease was sitting upright. By degrees œdema of the feet showed itself, and extended to the legs; at length the abdomen became distended from effusion, and the scrotum was swollen to a great extent. His countenance was livid, swollen, and of a doughy appearance. The upper extremities presented the same phenomena.

He was first visited by Dr. W. on the 17th of November, 1825; he found him lying in bed, with his head and shoulders greatly elevated, and unable to rise. The preceding night he had suffered a very severe attack of suffocation; for fear of a return of which, he begged, with tears in his eyes, that the doctor, by puncturing the abdomen, would relieve him of the load of water which it contained, and thus enable him to assume the erect posture. His carotids throbbled violently; the heart beat with such force that the whole of the left side of the chest was shook by its action. The motions of the chest were distinct, commencing above and extending downwards. The pulse was regular, somewhat tense, and moderately full, ninety in a minute. The respiration was rattling, as though some obstruction existed in the trachea. The patient could speak only with great difficulty; the tone of the voice was hoarse and low. The body presented all the symptoms of extensive general dropsy. Appetite and digestion not particularly affected; the tongue very

red and clean; great thirst; the skin had the feel of dry parchment. The skin on the fore part of the scrotum, being irritated by the passage of the urine over it, presented an erysipelatous appearance; as also did the calves of the legs. The patient complained of considerable pain of the left thigh.

Notwithstanding the dropsy was to be viewed as an effect of disease of the heart, under which the patient evidently labored, yet, with a view of mitigating his sufferings, as well as to take off the extreme tension of the skin, from which gangrene was to be feared, Dr. W. punctured the abdomen. Though but a small quantity of fluid was discharged, the patient felt somewhat relieved. Diuretics were directed internally; and, externally, tepid poultices, with acetate of lead and laudanum, to the left inferior extremity.

Next day, near six quarts of water discharged by the puncture; the patient much relieved; had a quiet night. Poultices exchanged for a decoction of chamomile flowers, with acetate of lead and laudanum. Seltzer water to allay the thirst.

On the ensuing day, symptoms the same. Diuretics continued.

On both of the two following days, bowels evacuated; pain of left thigh increased, with redness. Chamomile decoctions discontinued, and a decoction of oak bark, with the same additions, directed.

On the 22d of the month, dropsical symptoms considerably abated; palpitation of the heart much diminished; the patient could stand without assistance, and sat up the greater part of the day in an arm chair.

On the 25th, frequent watery stools, weakness, the pulse more frequent and strong. Diuretics discontinued, and frictions to the abdomen of spirit. terebinth. and camph. united by the yolk of an egg.

From this time the patient rapidly declined in strength. On the 29th, gangrene of the left thigh. On the 30th, the patient died.

Sectio cadaveris. The thorax only examined; it contained about a pint of bloody serum. Lungs healthy, but pressed backwards, in consequence of the augmented size of the heart; they were not greatly distended with blood, and nowhere adhered to the pleura. The pericardium adhered completely to the surface of the heart, with the exception of that part which is next the diaphragm, where not a trace of it was discoverable, the heart lying immediately upon the latter. The heart was at least three times its normal size, and filled with a considerable quantity of black half coagulated blood; the parietes of both ventricles being of a thickness proportionate to the augmented bulk of the organs. The most remarkable circumstance was the absence of the septum ventriculorum, of which not a trace remained; notwithstanding which, the openings of the great vessels were entirely natural, excepting that those of the veins were somewhat enlarged; the valves perfect. The auricles, with the exception of their increased size, were also in every respect natural. The aorta arose very straight, and was filled with a fibrous coagulum. The veins were collapsed, and contained a small quantity of fluid blood; this was also the state of all the great

veins of the chest. The ductus arteriosus was, as usual, entirely closed.—*North American Med. and Surg. Journal.*

Influence of the Male extending beyond a single Impregnation.—

“A seven eighths Arabian mare, belonging to the earl of Morton, which had never been bred from before, had a mule by a quagga: subsequently she had three foals by a black Arabian horse. The two first of these are thus described: “They have the character of the Arabian breed as decidedly as can be expected where fifteen sixteenths of the blood are Arabian, and they are fine specimens of that breed; but, both in their color and in the hair of their manes, they have a striking resemblance to the quagga. Their color is bay, marked more or less like the quagga in a darker tint. Both are distinguished by the dark line along the ridge of the back, the dark stripes across the forehead, and the dark bars across the back part of the legs. Both their manes are black; that of the filly is short, stiff, and stands upright; that of the colt is long, but so stiff as to arch upwards, and to hang clear of the sides of the neck; in which circumstance it resembles that of the hybrid. This is the more remarkable, as the manes of the Arabian breed hang lank, and closer to the neck than those of most others.”* Mr. Mayo, who quotes this curious fact in his excellent “*Outlines of Philosophy*,” observes, that “a similar occurrence to the preceding is mentioned by Mr. Giles, respecting a litter of pigs, which resembled in color a former litter by a wild boar. The best explanation of these phenomena is to suppose that connexion with the male produces a physical impression, not merely upon the ova which are ripe for impregnation, but upon others, likewise, that are at the time immature. In gallinaceous birds, in turkeys, for instance, it is well known that a single coitus will actually impregnate all the ova that are laid during the breeding season. The explanation which I have offered seems to me far more reasonable than any supposed influence of the imagination, the effect of which on any occasion, even in human beings, appears more than doubtful.”—*Mayo's Physiology*, 2d ed. p. 489.

Influence of Operations on the Neck on the Nutrition of the Eye.

—M. Mayer has experimented for this purpose on several domestic animals. When the great sympathetic was tied in the neck, it occasioned some disorder in the nutrition of the eye on the same side, manifested by inflammation of the conjunctiva. Injury of the nervus vagus is often followed by the same effect. When both the vagus and sympathetic are tied, the effect is more manifest, and the inflammation extends to the interior of the globe of the eye.

When one carotid is tied, not much effect is produced; but, if both are secured, the eyes always suffer more or less, they lose their brightness and their vital turgescence; however, it rarely happens that complete disorganization ensues.

But, if the vagus, great sympathetic, and carotid are included in

* *Philos. Trans.* 1821, p. 21.

the ligature, an exudation of plastic lymph takes place on the anterior surface of the iris; this new product, which is membranous, completely closes the pupil. In time, suppuration of the cornea and staphyloma are observed.—*Bulletin.*

On the Functions of Different Parts of the Ear.—Dr. Charles L. Esser, in a work crowned in 1825 by the medical faculty of the university of Bonn, has been led, by numerous experiments, to the following conclusions:

The *cartilage of the external ear* seems to contribute little to rendering sounds more clear, but seems to augment their force not only by reflecting into the auditive canal a part of the sonorous rays, especially those that fall into the concha, but also by means of vibration which the sonorous rays produce in it, and which it transmits to the tympanum.

The *bones of the head* contribute no less than the cartilage to the propagation of sounds. This propagation does not depend solely on the nerves, as was thought by Treviranus, Swan, &c.; for a watch applied to a swelled cheek ought to produce sounds as clear through the medium of the fascial nerve as if applied on the zygomatic arch, which is not the case. The *os occipitis* is better fitted for propagation of sounds than the bones of anterior parts of the head, which depends on its connexion with the labyrinth, and its nearness to the mastoidal cells. The use of these cells is not to prevent an echo in the internal ear, as M. Treviranus supposed; that function devolves solely on the eustachian tube. In many animals, the bones that surround the external ear are disposed so as to favor, in a high degree, the transmission of sounds, and they offer compensation for the absence of an external ear.

The external auditory canal is evidently the part which contributes most to the concentration and transmission of sounds to the *membrana tympani*.

The *membrana tympani* is made to vibrate by the sonorous rays that reach it; nevertheless, this is not the only use of the membrane, for the sonorous vibrations not only may reach the ear without the aid of the *membrana tympani*, but may even reach it with greater strength. It serves to protect the ear from external injuries.

The eustachian tube is the chief auxiliary to the *membrana tympani*, and fulfils four different functions.

1. It allows the air contained in the cavity of the tympanum to be in a state of equilibrium with the external air. If this equilibrium be lost, certain anomalous sensations are experienced, such as tinkling and buzzing of the ears. If the quantity of air in the cavity is augmented by strong expirations, then too strong a pressure on the membrane of the tympanum takes place, as well as on the other parts of the cavity, particularly the *foramen rotundum*; this pressure produces buzzing, which decreases in proportion as the atmospheric equilibrium is restored through the eustachian tube. If the air of the cavity becomes rarified, and the eustachian tube closed by spasm, then the external air pressing on the membrane finds its

way through the pores of that organ, and thus produces the tinkling of the ears.

Both these phenomena disappear as soon as the equilibrium is restored in the cavity, and this may be effected by forcing the air along the eustachian tube by breathing with the nose and mouth closed, or by introducing the end of the little finger deeply into the external meatus, and withdrawing it by degrees, making at the same time pressure against the upper surface of the canal. In this way a vacuum is formed, the membrane is brought back towards the external meatus, and the eustachian tube gives passage to the air that presses into it from the fauces. This explanation manifestly can only apply to the occasional occurrences of buzzing, &c. Chronic examples of these affections depend on cerebral congestions or anomalous actions of the nerves.

2. The second function of the eustachian tube is to admit of the occurrence of vibrations in the cavity of the tympanum, which could not be the case if it were entirely closed.

In cases of deafness occasioned by obliteration of the eustachian tube, perforation of the membrane becomes a means of cure, by reestablishing the communication with the external air.

The idea that the sides of the tube are constantly in contact with each other is incorrect.

3. The tube prevents confused vibrations of the air of the cavity, by giving them a passage outwards.

4. Finally, it serves to lead into the posterior nares the mucus secreted into the cavity and on its own surface.

The *small bones of the ear*, by means of their muscles, are capable of rendering the tympanum more or less tense; but it is difficult to conceive why, and how, this effect takes place. Their influence on the sense of hearing is not very remarkable. They serve to transmit the sonorous vibrations of the *membrana tympani* to the *foramen ovale*, although this is not their sole use.

The *labyrinth*, whose anatomical history is sufficiently understood, is still, and will probably continue to be, the obscurest part of the apparatus of hearing, as relates to its physiology. The experiments of Weber leave it a doubtful question whether the lymph of Cotugno exists during life, or is a production occasioned by the death of the animal.

The *vestibule*, or the membranous bags which represent it in certain animals, and the *semicircular canals*, appear to contribute most to the sense of hearing, but it is difficult to say in what manner. Some facts in comparative anatomy seem to show that the principal use of the *semicircular canals* consist in strengthening the sounds. They are larger in animals whose external ear is less favorably formed or wholly wanting. Large *semicircular canals* are generally accompanied with a small *cochlea*, and *vice versâ*.

The *cochlea* appears to be of less importance than the *semicircular canals*; for it soon disappears in the descending scale of animals, and birds only possess a rudiment of it. Its use appears to be, to offer a large surface to the sonorous vibrations, and to strengthen by concentrating them.

The act of distinguishing different objects is a purely intellectual function, which we must not seek for in any particular parts of an organ of sense. This power has been supposed to reside in the cochlea; but if its development was in every case to be regarded as a measure of this distinguishing power, the following order might be established: The cabais and porcupine, whose cochlea has three turns and a half; the dog and fox, with three turns; man, the cow, the hog, and cat, with two and a half turns; the horse, and the dolphin, with two and a quarter; and the hare with two turns. Birds would occupy the lowest rank in this series. Such facts need no comments.

The part which the *acoustic nerve* plays in the sense of hearing is undoubtedly of great importance, but its manner of acting will always remain an impenetrable mystery.

The author of this interesting memoir finally arrives at the conclusion that all parts of the auditory apparatus concur in the act of sensation; but the sense of hearing itself is not explicable by means of these parts, for, like all the other senses, this is purely intellectual. The soul alone sees and hears, the rest is both blind and deaf.—*Ibid.*

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On the Capacity of the Lungs in the healthy and diseased state.

—The statements of physiologists differ materially as to the mean capacity of the lungs. Passing over the earlier experimentalists, we find that, according to the experiments of *Jurin*, at each natural expiration 40 cubic inches are discharged, and by a violent expiration 220 inches: that according to *Goodwin*, after a complete expiration 109 cubic inches on an average remain in the lungs, while a natural inspiration introduces only 14 inches more: that *Menzies* procured for each natural inspiration 40 cubic inches, for each forced inspiration 200 inches: that *Abernethy* estimates each natural inspiration no higher than 12 inches: that *Kite* estimates a natural inspiration at 17 inches, a forcible inspiration after a forcible expiration at 200, and the air remaining in the lungs after a forcible expiration at 87 inches: that *Jurine* admits 20 inches, and *Delametherie* only from 4 to 6 as the amount of a natural inspiration: that according to *sir H. Davy* 41 inches are contained in the chest after a forcible expiration, 118 after a natural expiration, 13 more after a natural inspiration, and 254 after a violent inspiration: that according to *Bostock* 280 inches are contained after a natural expiration, 40 are added by a natural inspiration, and if we add 90 more for a forcible inspiration, the lungs will contain 410 cubic inches: that *Cavallo* adopts 30 cubic inches as the amount of air inspired during natural respiration, when this is performed eleven or twelve times in a minute: and that *Abilgaard* estimates a natural inspiration so low as 3 inches. Of these extraordinary discrepancies, some must have been produced by errors of observation or faulty instruments of measurement. But it is probable that many of the differences have also depended on differences in the subjects of experiment. Independently of the obvious differences of stature and size of chest, a considerable difference, in all proba-

bility, exists according to the relative rate of the breathing in different individuals, which, even in healthy subjects, varies from eleven or twelve to twenty-four, or even twenty-six in a minute.

This subject has been lately taken up by Dr. Herbst of Göttingen, who, in a journal quoted above, gives a detail of the researches of all his predecessors, and of a numerous set of experiments which he has himself performed, apparently with great care. The instrument he prefers, on account of its simplicity and the ease with which it may be managed, is a variety of that employed by Dr. Kentish, being simply a graduated glass bell-jar, capable of holding 367 cubic inches, (French measure,) standing in a vessel of water, and having at its summit a wide tube and stop-cock, to which was attached a glass tube of the shape of a horizontal S (ω .) When an unpractised person attempted to breathe in an easy manner out of this jar, the gravity of the water which rose into the jar to supply the place of the air withdrawn, rendered his inspirations shorter than natural. This was soon made manifest by his requiring to take a long breath after several such inspirations. By practice, however, the various individuals whom Dr. Herbst subjected to experiment easily acquired the power of breathing from the jar exactly as in the open air, so that after many inspirations no uneasiness was felt. Besides, the accuracy of the results was always verified by subsequently causing them to make an equal number of expirations into the jar previously filled with water.

By observing all the requisite precautions, very uniform results were procured under similar circumstances. The quantity of air inhaled during easy breathing was found to be, in unusually short people, from 16 to 18 cubic inches, and in those of ordinary stature from 20 to 25 inches. Menzies's estimate of 40 inches was found to be such as no man could maintain for a short while without effort and uneasiness.

The extreme capacity of inspiration and expiration differed very much in different individuals. A healthy man, 22 years old, five feet ten inches tall, and of moderate strength, after a full expiration, inspired 184 inches, after a full inspiration expired 180. A delicate young man, 19 years old, could not inhale more than 90 inches after the fullest expiration. A stout lad of 16, and five feet two inches tall, expired after a full inspiration 160 inches. A little man, 22 years old, and of the same stature, expired 144 inches. A little Jew of the same age only 120. Fat men had commonly less capacity of lungs than others; two stout, healthy, fat men, one 27 and the other 30 years old, could not exceed 140. The greatest capacities which Dr. Herbst had occasion to notice, were 232 and 244 cubic inches; the former was the expiration of a powerful young man, six feet tall, the latter of a very powerful broad chested man of middle stature. The effect of tight clothes in diminishing the capacity of inspiration is very striking: A middle sized man, 20 years old, after a natural expiration inspired 80 inches when dressed, 106 when his tight dress was loosened; after a full expiration he inspired 126 inches dressed, 186 undressed. Another young

man 21 years old, five feet eight inches tall, and of stout make, after a natural expiration inhaled while dressed 50, when undressed 96 inches, and after a full expiration 130 in the former case, 190 in the latter. In women the capacity of the lungs is much inferior to that of men. A girl 18 years old, and of middle strength, expired 106 inches after a full inspiration; another 19 years old 120 inches, and stout women about 30 expired from 130 to 144. It is probable that after a full forcible expiration, very little air remains in the lungs. From several experiments made on the bodies of healthy men who had died in consequence of severe injuries, Dr. Herbst found that the lungs, when distended as far as possible, without tearing them, never held more than 186 cubic inches.

A remarkable fact is that, in proportion to their weight, the lower animals have much more capacious lungs than man. The capacity of the lungs in grown up cats is from 20 to 24 cubic inches; that of a terrier twelve pounds in weight, was 38 inches; that of a mastiff thirty-five pounds in weight 90 inches. Their relative capacity in different men appears *cæteris paribus* to bear a constant ratio to the bodily strength; and this enormous proportional increase in the lower animals is evidently closely connected with the same circumstance.

In diseases of the chest, the capacity of the lungs is very much diminished. A pretty tall young man, affected for some time with palpitation, difficult breathing, cough, and soreness in the breast, could inspire after an ordinary expiration only 30, after a full expiration only 90 inches; a man 44 years old, and of middle stature, who had been long liable to *angina pectoris*, could inhale after a forcible expiration 96 inches; a man 36 years of age, who had all the symptoms of confirmed phthisis, could inhale only 42 inches; a young woman, short in stature, and recovering partially from phthisical symptoms, could inhale 46 inches after a full expiration, 26 after an ordinary expiration.—*Archiv für Anatomie und Physiologie*, No. 1. 1828.

On the Action of the Arteries in the Arterial Circulation.—In the original communications of the present number of this Journal, is inserted a full analysis of a very valuable physiological paper, by M. Poiseuille, a graduate of Paris, on the force of the aortic or left side of the heart. By a series of well devised and apparently accurate experiments, the author arrived at the unexpected result, that the force of the blood in the arteries will support a column of mercury of the same height with whatever part of the course of the arterial circulation the column is placed in connexion—whether, for example, it is connected with the origin of the carotid, or with a branch derived by repeated subdivision from the crural artery. And, consequently, he concludes that the force with which a molecule of blood moves, is the same throughout the whole arterial circulation. Following out these researches, he proceeds (in a paper, the subject of which is given as the title of the present article of intelligence) to enquire in what manner the original impulse communicated by the heart, is transmitted unimpaired to distant parts

of the circulation, notwithstanding the retarding tendency of friction, and the yielding of the parietes of the vessels.

His first object here was to ascertain whether the arteries are dilated by the stroke of the heart and impulse communicated to the blood, and what the amount of the dilatation may be. It is well known that, by most physiologists, a very extravagant idea used to be entertained of the amount of their dilatation; on the other hand, that the later researches of Parry, and other experimentalists, have assigned exceedingly narrow limits to it; nay, that by one eminent physiologist, Bichat, it has been denied altogether. M. Poiseuille has determined the point by means of a very satisfactory set of experiments with an apparatus of his own invention, and has ascertained that dilatation is effected, but that it is so small as certainly to be undistinguishable in an artery by the unaided senses. This apparatus cannot be thoroughly described without a diagram; it will be sufficient, therefore, for us to mention, that it is so contrived, as to contain about eight inches of the carotid artery of the horse in a vessel filled with water, and made water tight, except at one point from which a small horizontal glass tube issues, about an eighth of an inch in diameter. At each contraction of the animal's heart, it was found that the water in this small tube advanced two inches and eight tenths, and that it retired to its former place during the diastole of the heart. The diameter of the artery was seven twentieths of an inch. Hence it may be calculated that at each pulsation its capacity was increased by about a thirtieth part.

Having ascertained this fact, M. Poiseuille goes on to enquire, whether the power which is expended by the blood in causing this dilatation is restored by the subsequent contraction of the artery. For this purpose a portion of the common carotid artery of the horse ten inches long, and seven twentieths of an inch in diameter, taken immediately after death, was connected with the end A, of such a tube as is represented in page 30 of this Journal, a stopcock, however, being previously fitted between A and B. The other end of the artery was fixed on a tube of analogous construction, different in fact only in so far as the limb C D was inclined at about half a right angle instead of being vertical, and the stopcock was placed near the end D. The whole of the first tube, the artery and part of the descending limb B C of the second tube, was filled with water, a little mercury then filled the curvature of the second tube, and the ascending inclined limb of that tube above the mercury was filled with water. The stopcock of the last tube being closed, and that on the first tube being opened, mercury was poured into the former by its end D, till the pressure on the artery amounted to ninety-five millimetres, or about 3.8 inches. The stopcock of the first tube was then closed, and that on the second tube was opened; upon which the water rose instantaneously in the latter, a portion flowed out at the top, and the remainder then sank a little, and assumed a fixed level. On making the necessary computations, M. Poiseuille found that the point to which the mercury was raised in the second tube at the moment of the contraction of the artery indicated an elevation of 110 millimetres, or 4.4 inches. Hence *the power*

with which the arterial coats contract upon themselves after being dilated exceeds that which is expended in dilating them. In the present experiment, the excess was equivalent to six tenths of an inch of mercury, or three nineteenthths more than the dilating force. In three other experiments, the excess of the column of mercury was nine twentieths, fourteen twentieths, nineteen twentieths of an inch. When repeated with the artery of an animal which had been killed four days before, the excess was less than four twentieths. It is evident, therefore, that whatever force the blood, after issuing from the heart, loses in consequence of its acting on yielding vessels, is completely restored by the elastic contraction of their parietes.—*Journal de Physiologie Janvier, 1829.*

PATHOLOGY.

Anatomical and Physiological Researches on Emphysema of the Lungs.—Pathologists, in examining bodies after death, have been accustomed to suppose that the lungs are in a healthy state, when they crepitate on being handled, and the air cells are regular and not of unusual size. M. Piedagnel, in a paper contained in Magendie's Journal, undertakes to prove, on the contrary, that the lungs are never healthy when they crepitate; that they never crepitate except when affected with general or partial emphysema; and consequently that emphysema of the lungs is an exceedingly common disorder, being in fact produced at the close of very many diseases by the dying efforts of the patient to maintain respiration. If, says he, the chest of a dog that has recently died without making violent respiratory efforts be opened, the lungs contract very much, and when taken out and handled or cut, they feel soft, flaccid, and totally destitute of crepitation. If again the same experiment be made on the chest of an infant that has only lived a few hours, and the lungs are gently and not too much inflated, they contract in like manner to a great extent, and do not crepitate when squeezed between the fingers. Or if the experiment be tried with the lungs of an adult who has died without a concluding stage of agony, and not of a disease of the organs of respiration, it will likewise be found that the contracted lung is soft, more or less flaccid, destitute of crepitation when gently pressed or when cut into. Such, then, he concludes, must be the natural condition of the lungs. But if the lungs of an animal, a child, or an adult, such as we have described, be inflated artificially with considerable force, they do not afterwards sink so completely, they are much more elastic, and they crepitate when handled or cut. Since crepitation does not exist in their natural state, and may thus be produced at will, it must always be a morbid phenomenon when it takes place spontaneously. And on considering the circumstances under which it is produced, we must come, continues M. Piedagnel, to the conclusion, that it arises from the rupture of the air cells, and the passage of air into the cellular tissue between them. In the dead lung, crepitation is

caused by forcible distension from the trachea, and also very effectually by blowing air into a hole in the pleura; the obvious effect of which must be to distend the cellular tissue. Accordingly in the frog, in which the air cells are large, and the cellular tissue very scanty, the lungs cannot be made to crepitate by artificial distension. Towards the close of life, it is caused by every form of disease which terminates in laborious breathing. Hence it is met with in all cases of violent and prolonged death, in every acute disease which terminates in long painful agony, and in all affections of the lungs or brain, which cause obstruction of the breathing. In such circumstances it will be remarked, that respiration consists in a sudden deep inspiration followed by closure of the glottis, and a gradual expiration, during which, in consequence of the difficulty the air experiences in passing through the glottis, it is subjected to pressure on the lungs. On the contrary, the lungs are seldom found to crepitate in chronic diseases which have had a long course, and brought the patient by insensible steps to the tomb. In particular, they seldom crepitate after death from cancerous affections of the abdomen.

Since emphysema, then, is a derangement of structure so common and so easily produced in the last moments of existence, may it not also arise, adds the author, in other circumstances where its immediate cause is less evident? And may we not thus explain many of the alleged cases of sudden death, which happen not unfrequently in hospitals, without any morbid appearances being detected in the dead body to account for it? The two following examples are quoted in confirmation of this conjecture. A man, thirty-six years of age, and of sound constitution, was admitted into the hospital of St. Antoine, on account of pains in the abdomen and slight pulmonary catarrh consequent on suppression of a hemorrhoidal discharge. After being a few days in the hospital, he was getting the better of his trifling ailments, when he began to complain of obstructed breathing, and a sense of weight in the epigastrium, which prevented him from taking a full breath. As his pulse was frequent, venesection was ordered; but before it could be performed, he died. On examining the body, the inspector could find no diseased appearance worthy of note, except that the lungs were voluminous, filled the whole chest, and crepitated strongly. Another man, sixty-one years of age, and in general healthy, but liable for three years before to occasional pulmonary catarrh, was admitted into the same hospital on account of violent cough with copious mucous expectoration, and mucous rale; but his breathing was natural. Three days after his admission, he also complained of impeded respiration; and next morning he was found dead in bed. When the body was examined, it was considered that every organ, and among the rest, the lungs, were sound. The lungs, however, says M. Piedagnel, were crepitating and full of air, filled completely both sides of the chest, and on the left side were indented by the ribs, whence he had no difficulty in concluding that the patient had died from the sudden infiltration of air into the pulmonary cellular tissue.

Another practical inference which may be drawn from his researches is, that in supporting the breathing by artificial inflation of

the lungs, care must be taken not to inflate the chest with too great force. This caution was suggested not long ago by M. Leroy d'Etiolle, in consequence of experiments on living animals of a nature parallel with those performed by M. Piedagnel after death. But it may nevertheless be useful to see what the latter enquirer has to say on the subject. He informs us that in 1826 he delivered a lady of a stillborn child, which he endeavored to bring to life by artificial inflation of the lungs, but without avail. On examining the body, he could not discover any obvious cause of death, but the lungs were strongly emphysematous. He was therefore led to conceive that the emphysema had been caused by the inflation, and that thus a fresh cause of death had been unwarily added to that which already existed. On subsequently making some experiments on living animals he arrived at the same results as M. Leroy d'Etiolle. Sudden inflation caused immediate embarrassment of the respiration, proving speedily fatal; and he found in the dead body the lungs pale and emphysematous.

He further remarks, that pulmonary emphysema has appeared to him to be the cause of death in those extraordinary cases of sudden death, which have taken place during operations at the root of the neck, from the passage of air into the veins. In two melancholy instances which happened at Paris of sudden death from that cause, during the removal of a firm cellulo-fibrous tumor from the neighborhood of the clavicle, one of which has been recorded in Magendie's Journal, vol 1st, and the other in the 3d vol. of the *Archives Générales de Médecine*, M. Piedagnel says the most striking appearance was emphysema of the lungs marked by crepitation and the want of subsidence of the lungs. Death in such cases has been usually ascribed to the air entering the heart in such quantity as to deprive that organ of a due quantity of its proper stimulus; by others it has been ascribed to the air entering the brain in the arterial blood; but the author appears to us to give a more satisfactory explanation of the accident.

He is disposed to dissent from Laennec as to the possibility of mere dilatation of the air cells of the lungs being accompanied with the symptoms of emphysema, and maintains that such a state of the lungs has been found in the bodies of persons who did not labor under any impediment of the breathing, and that in those who have had such symptoms there is always found, besides enlargement of air cells, effusion of air into the cellular tissue around them, the effect, he supposes, of rupture of the air cells at the time the breathing first becomes materially disturbed.—*Jour. de Physiol.*

Case of Double Uterus and Vagina in the Human Subject.—On the 14th November, 1827, a woman was brought into the Hôtel Dieu, about 65 years of age, named Raley. She had been found on the floor of her room in a state of insensibility, and bathed in blood, which she had vomited. A few hours after her admission to the hospital, she expired.

On opening the body, the stomach, and the whole intestinal canal were found filled with black coagulated blood, but without any ap-

parent breach of surface. After having carefully examined all the viscera and the vessels, which were quite empty, pale, and colorless, M. Jolly, on looking at the uterus, was surprized at the very small size of that organ. On putting the finger into the vagina, he found a membranous division, which separated that canal into two equal parts. After examining the attachments of the uterus, which were in all respects natural, he removed the rectum and bladder, together with the genital organs, which he inspected with MM. Dance and Dalmas. The external organs presented no extraordinary appearance; the entrance to the vagina was narrow and smooth, without any traces of ruptured membrane, and divided by a partition into a left and right portion of equal size; the length of the canal was four inches. The portion, half a line in breadth, was formed by the apposition of the mucous membranes; interiorly there was nothing remarkable but the smallness of its transverse diameter. The uterus presented no other remarkable feature exteriorly but its small size; it was not more than eighteen lines across; its upper external edge showed a slight depression, which divided the organ into two cavities; from the middle of this depression, a longitudinal groove ran along the whole anterior surface of the uterus and vagina. A lateral section from the neck of the uterus, prolonged along its body, exhibited the one cavity without any communication with the opposite side, both inferiorly and superiorly. The cavity of the neck was very narrow, scarcely admitting an ordinary probe, about three or four lines in length, and equally separated by a partition; it terminated by a circular orifice, without any trace of irregularity. This orifice was situated in the centre of the neck, which, embraced by the vagina of that side, formed a projection at the upper part of that canal. The partition which ran along the body and neck of the uterus and vagina had the same organization and thickness as the parietes of the uterus.

At each superior angle of the body of that viscus, at the point where the fallopian tubes ought to be inserted, and instead of them, there was found an appendix, a real uterine horn, eighteen or twenty lines in length, cylindrical in shape, as large as the little finger where it was inserted in the uterus, swelling out in the middle, and suddenly becoming fine where it terminated in the fallopian tube.

This horn, placed horizontally at the upper part of the broad ligament, presented an oval shaped cavity, three lines in diameter, smooth, and even like that of the uterus, communicating freely with its cavity, and also communicating freely at its smaller end with that of the fallopian tube; its parietes, two lines in thickness, had the same structure as the uterus. Neither the fallopian tube nor the ovaries offered any thing remarkable.—*Jour. Hebdomad.*

Dilatation of the Aorta—Hypertrophy and Dilatation of the Heart—Disease of the Aortic Valves.—Lindsay Corstairs, aged 61, a printer, emaciated, but tall and of athletic conformation, complains of most distressing dyspnœa, worst in the night, induced by stooping or the slightest exertion, and sometimes supervening spontaneously.

During the paroxysm, the inspiration is sibilous, and the respiration so frequent and laborious as to throw all the auxiliary muscles of the neck and shoulder into vehement action. The countenance is at first universally flushed, in a minute or two it becomes deadly pale, and finally livid. The jugular veins swell and pulsate violently. The heart palpitates, and, with a powerful and profound succession, visibly shakes the whole chest and epigastrium. He is disturbed by frightful dreams, and starts from sleep in a paroxysm of gasping palpitation; somnolency is so oppressive, that he sometimes sleeps erect on a stool during a stethoscopic examination. Throbbing pain in the head, particularly in front; tinnitus; indolence, both mental and corporeal. Frequent cough, with copious expectoration of viscid, ropy mucus.

Œdema of the feet and scantiness of urine, of a week's standing only. Pulse 96, and extremely strong; appetite and digestion good; bowels costive.

His complaint commenced a year ago, and was at that time speedily relieved by venesection and purgatives. It recurred twice, at intervals of two months, and each time yielded, but with increasing difficulty, to the same remedies.

Stethoscopic exploration. Resonance, on percussion of the præcordial region, is deficient.

Impulse of the heart is perceptible over the whole anterior surface of the chest; but it is strongest on the left of the mesial line. Below the left nipple it is venement; on the lower third of the sternum it is more languid, though still preternaturally violent. Between the spine and the left scapula, a deep seated movement is perceptible by the cylinder.

Sound of both ventricles is morbidly loud, and it is produced into the auricular sound, so as to leave little interval of repose. The sound of the left ventricle, explored below the nipple, is louder than that of the right, at the inferior part of the sternum. This is referable to a loud bellows sound accompanying the systole of the left ventricle; it is less audible on the right side of the chest than on the left, and immediately below the left clavicle, it is louder and more hoarse than in the vicinity of the left ventricle. In every situation a double sound is heard; but the second, which is that of the auricles, becomes more distinct in proportion as it is explored nearer the heart.

The carotid arteries pulsate violently, and above the sternal extremities of the clavicles a remarkably strong impulse, with a peculiar vibration, which M. Laennec has aptly compared to cat's purring, is felt on application of the fingers. The stethoscope transmits a hoarse sound, like that of rasping wood, much louder and more abrupt than the bellows sound in the præcordial region.

Respiration is in some parts puerile, but in other respects natural.

Diagnosis. Disease of the valves; great hypertrophy, and dilatation of the left ventricle; dilatation of the right ventricle, with a less degree of hypertrophy; congestion of the lungs, without alteration of structure.

Prognosis. Death. He died four months after admission, the

treatment having consisted in occasional sparing venesections, aperients, fœtid antispasmodics, and rest.

Necrotomy. The heart was more than double its natural size.

Right ventricle was dilated to the size of a lemon: its thickness at the base was about four lines; at the apex, about two or three. The columnæ carneæ were remarkably large. The valves of the right side were small.

Left ventricle. The parietes were about an inch thick at the base, and half an inch at the apex. The cavity was larger than that of the right ventricle. The mitral valve was natural; but the bases of the aortic valves were converted into dense fibro-cartilage, and formed a rigid ring encircling the orifice. The loose margins of the valves, and particularly the corpora sesamoidea, exhibited the same morbid appearance; and the intermediate membrane was studded with patches of a dark red substance, resembling muscular fibre.

Aorta. The ascending portion and the arch were double their natural size. The internal membrane was converted into a thick, knotted, and striated substance, of intense brown-lake color, presenting the appearance of coarse muscular fibre; bedded in it, there were a few scales of rigid, but not osseous, deposition.

Lungs were gorged with blood and serum, but they had not sustained any change of structure.

In this case I did not foresee dilatation of the aorta; for, as this was the first instance in which its physical signs had attracted my attention, I was totally unconscious that they were characteristic of the disease. However, the pulsation, the purring tremor, and the peculiarly abrupt, hoarse, rasping sound, excited my curiosity, and induced me to make particular notes, with the view of ascertaining, by post mortem examination, on what causes the phenomena depended.

In the diagnosis appear the words 'dilatation of the right ventricle, with a less degree of hypertrophy.' It might be objected that there was no hypertrophy of the right ventricle, as its parietes were not appreciably thickened; it therefore did not answer to the definition of hypertrophy given by Laennec, and of active aneurism by Corvisart.

But, when there is amplification of a cavity, without extenuation of its parietes, there must necessarily be an augmentation of muscular substance. This, therefore, is essentially hypertrophy, and it produces the symptoms of that affection, rather than those of 'simple dilatation,' or 'passive aneurism.*' In the present instance, the action of the ventricle in question was morbidly increased; this, however, might have been partly owing to the great enlargement of the columnæ carneæ.—*London Medical Gazette.*

Dilatation of the Arch of the Aorta, of the Carotids, and of the Heart—Disease of the Valves.—Henry Stewart, aged 48, many

* The first term is employed by Laennec, and the second by Corvisart, to indicate the same condition.

years a sailor. In 1815 he became a hewer in a stone quarry. A year previous to admission, after an uninterrupted course of good health, he was seized, in consequence of exposure to cold, with a severe cough and copious expectoration of foul mucus.

He states, that six weeks afterwards, while walking, his respiration was suddenly suspended, and he fell down, deprived of consciousness and the power of articulation. On recovering from the attack half an hour afterwards, he found himself affected with a severe pain in the epigastrium and abdomen. This was speedily relieved by antiphlogistic remedies, but it left dyspnœa, palpitation, and cough, which daily increased, and were exasperated into a paroxysm by the slightest exertion. These symptoms continue, and, in addition, he has almost universal dropsy, scanty and high colored urine, great somnolency, and frightful dreams, from which he suddenly awakes in a fit of palpitation and dyspnœa. The cheeks exhibit a vivid circumscribed redness, which is converted into lividity during a paroxysm. Turgescence, but no appreciable pulsation of the jugulars; pulse 90, full and bounding; acidity, and sometimes vomiting; great debility; no dysphagia nor pain in the chest.

Stethoscopic exploration. Above the sternal end of each clavicle there is a strong pulsation, extending with diminished force to the angles of the jaws: it is not perceptible immediately below the clavicles, or on the sternum.

The carotids, when grasped by the fingers, seem to be enlarged. A remarkably strong 'purring tremor' accompanies the pulsation above the clavicles, and the cylinder transmits a hoarse, abrupt, rasping sound, synchronous with the pulse. This sound, heard below the clavicles, seems softened and obscured by distance, and towards the third rib it becomes so faint as to be absorbed by the sound of the ventricles, which progressively increases as the auscultator approximates towards the præcordial region. Immediately after this sound, a second is heard; above the clavicles it is obscure, but it gradually becomes more distinct on drawing nearer to the heart, and is finally recognized to be the auricular sound.

Between the left scapula and the spine, a single, hoarse, abrupt, rasping sound is distinctly heard.

The left ventricular sound consists of a loud bellows murmur, combined with a peculiar sibilus, and it is prolonged into the auricular sound. The latter has the character of the natural ventricular sound, and it is continued into the bellows murmur which succeeds it.

The right ventricular sound is clearer than natural, and the auricular has much bellows sound. Both are louder than on the opposite side.

The impulse of the heart does not sensibly elevate the thoracic parietes, but it communicates to the chest a succussion stronger and more extensive than natural, being perceptible in the epigastrium, and below the seventh ribs, especially on the left side. Over a corresponding extent, resonance, on percussion, is deficient.

Respiration is in parts puerile, but otherwise natural.

Diagnosis. Dilatation of the aorta and of the carotids. Dilata-

tion of the heart; thickness of its parietes about natural. Disease of the valves. Structure of the lungs sound.

Prognosis. Death speedily. He died three weeks afterwards.

Necrotomy. The right ventricle would contain an average lemon. The thickness of the parietes was about natural, but the columnæ carneæ were somewhat enlarged. The valves were sound.

The left ventricle was rather more capacious than the right. The thickness of the parietes was half an inch at the base, and less towards the apex.

The mitral valve was slightly obstructed with cartilage.

The aortic valves were stiff with dense cartilage, and contracted in such a manner as to obstruct, without closing, the orifice.

The ascending aorta and arch were dilated to the capacity of three fingers. The arteria innominata admitted the thumb; and the left carotid equalled the third finger. The origin of each was slightly contracted by a dense rough ring, which encircled it. The internal surface of the aorta was converted, partly into a cartilaginous substance, and partly into one resembling granules of cheese, being soft, friable, and of dingy yellow color. This condition extended to the coeliac artery, and rendered the aorta so lacerable that it was rent asunder in being torn from the spine.

About four pints of serum were found in the cavities of the pleura. The texture of the lungs was sound.—*Ibid.*

Aneurism of the Aorta—Hypertrophy, Dilatation and Diseased Valves of the Heart.—Robert Mackenzie, aged 56, a tailor, is subject to a most distressing dyspnœa, which is excited by every species of exertion, and especially by ascending; occasionally orthopnœa; palpitation, the shock of which extensively shakes the left side of the chest; a harassing cough, with copious mucous expectoration; can only lie comfortably on the right side; his nights are disturbed by frightful dreams; great œdema of the feet; sometimes pains in the abdomen; pulse 108, very strong; bowels open, tongue clean, anorexia.

He states that he has been subject to pains in the abdomen and back for three years, but that the palpitation and dyspnœa are only of two years duration. The feet have been œdematous a week only.

Stethoscopic exploration. Above both clavicles, but especially the left, there is a remarkably strong pulsation and purring tremor, ascending with diminished force to the angles of the jaws; the pulsation is perceptible below the clavicles, particularly the left, and on the superior part of the sternum; lower down it becomes extinct.

The cylinder applied above the clavicles, transmits a single sound, extremely hoarse and grating, with an abrupt commencement and termination. As the auscultator recedes from the clavicles, in the direction of the heart, it decreases progressively, and is commuted for a duller sound, immediately followed by a second, which gradually increases on approaching the heart, and is finally ascertained to proceed from the auricles. Between both scapulæ and the spine, a single hoarse sound is heard.

Impulse of the heart is extremely violent, and it is perceptible beyond the natural limits. Resonance, on percussion of the præcordial region, is dull.

The sounds of the heart are, in every situation, morbidly loud; and the left ventricular systole is accompanied with some degree of bellows murmur.

Resonance of the chest is good, except in the præcordial region; and the respiratory murmur is in parts puerile, but otherwise natural.

Diagnosis. Aneurism of the arch of the aorta; hypertrophy, and dilatation of the heart; valvular disease on the left side; structure of the lungs sound.

Prognosis. Death within six months. He died in three months, the treatment having consisted of bloodletting, antispasmodics, diuretics, &c.

Necrotomy. The liver was pale, granular, and a little harder than natural. The diaphragm opposite to the heart was convex towards the abdomen, and about three pints of fluid were found in each cavity of the pleura.

The lungs were sound in structure.

The heart was of an immense size, the parietes being enormously thickened, and the cavities greatly dilated. The aortic valves were thicker, and more rigid, than natural.

The aorta, from its origin to the end of the arch, was dilated throughout its whole circumference; and in three parts it bulged still farther into pouches, equalling in size the half of an egg. At the posterior part of the arch, where it begins to descend, there was a fourth pouch of much greater magnitude, and rising with more defined margins. The lining membrane of the aorta was rendered uneven and rugged by a dingy yellow matter, partly diaphanous, like cartilage, and partly opaque, like cheese. The tunics of the pouches were dense, but so extenuated as to be perfectly translucent.

In this case I was led to suspect the existence of aneurism, and not of dilatation alone, by the pulsation being perceptible below the clavicles and on the sternum, parts in which it is never developed by simple dilatation, unless it be enormous.

Purring tremor has invariably appeared to me to be more considerable in simple dilatation, than in sacculated aneurism. In the present instance, as pouches were superadded to dilatation, and to great asperity of the interior surface, the tremor existed in an extreme degree.

The hypertrophy of the heart was manifest from the vehemence of the impulse. The dilatation was indicated by the loudness of the sounds, and by the shock extending far beyond the natural bounds. The latter circumstance is a sign of dilatation, because in the greatest degree of pure hypertrophy* the impulse scarcely ever exceeds the limits of the præcordial region.

The bellows sound indicated the obstruction of the aortic valves.

* i. e. Thickening of the parietes without amplification of the cavity.

I have frequently observed that when this sound has a soft character it is connected with a smooth surface of the diseased valve; and that when it has a harsh, grating, or rasping quality, it proceeds from a scabrous surface, occasioned by osseous deposition.

As there were no marked symptoms of hydrothorax at the time that the exploration was made, and as the hydroptic affection did not make great advances until a short time subsequently, there is reason to suppose that the effusion into the chest was posterior to the stethoscopic examination.—*Ibid.*

THEORY AND PRACTICE OF PHYSIC.

Fatal Case of Acute Glanders in the Human Subject. By ANDREW BROWN, Surgeon.—Glanders, until lately, was generally considered, I believe, a disease exclusively belonging to the horse, the ass, and the mule; but within the last few years several cases have been recorded, which unquestionably show the facility with which it may be communicated to the human subject, by the contact of morbid matter (from either of those animals) with the surface of incised or lacerated wounds: evinced not only by the subsequent inflamed state of the lymphatics, distinctly traced from the part originally inoculated, terminating rapidly in ulceration similar to farcy; but also by the matter taken therefrom possessing a most active power of reproducing this disease in its acute and genuine form. I am not, however, yet acquainted with any authenticated case having heretofore occurred where this truly formidable disease has been communicated to man by other means; either by cutaneous absorption, by effluvium, or by the incautious application of glandered matter to the nasal linings in picking, scratching, or blowing that organ; and should it be admitted that there is even a possibility of introducing this direful malady into the human system by any one of these means, or by a combination of the whole, then the following singularly untoward case may be at least elucidated, if not clearly and fully explained.

Case. Corporal John Wells, aged 38, a tall, well formed, florid complexioned, healthy looking man, originally a laborer, and had been upwards of nineteen years in the corps, during the whole of which lengthened period, he “was never once in the doctor’s list,” always enjoying the best possible health, until the night of the 16th of April past, when he was suddenly awoke from an unrefreshing sleep by rigors, headache, and slight irritability of stomach; all of which continued unabated when admitted into the hospital next morning—while he complained in addition of severe continued pains and stiffness in all his large joints, which became excessively aggravated on the slightest motion.

I am just informed, “these are the constant precursors when a combination of severe *acute* glanders and farcy first appear in the horse; and in all cases thus ushered in, death *speedily* and inevitably follows.”

He labored likewise under great depression of spirits, restlessness, and a general disturbance of all his functions, which he could not possibly refer to any particular cause; but on subsequent enquiry it appeared that he had had sole charge of a glandered horse for some time, which had been destroyed on the very evening of his attack; and that he had skinned him, and exerted himself a good deal in cutting up and burying the carcass. But these circumstances did not then create the least suspicion, and his complaint was considered a very severe case of acute rheumatism, and treated as such.

However, on the morning of the 19th, two days after admission, finding that the severity of his pains increased, under the most active means, and that his constitution was no longer able to bear a continuance of them, Dr. Home and myself became much alarmed, even at this early stage of the disease, in observing its unconquerable virulence and novelty of appearance, forming thereon, in consequence, a very unfavorable prognostic.

From this period the constant and general pain, night and day, became excessive and violent to a degree; but particularly over the left shoulder, which, on examination, showed the scapula slightly tumefied, although not inflamed; but being above the temperature of health, leeches were consequently applied over its entire surface, and it bled profusely for some hours after, without affording the least relief; it shortly after became hard, ecchymosed, and insensible to the touch.

The severity of his sufferings continued unabated, and on the morning of the 24th (seven days after his admission) the tumor over the scapula had assumed a dark livid color, and attained a considerable size, resembling in a strong degree the shoulders of a man recently and severely punished.

Similar tumefactions, but more circumscribed, were now observed on the legs, thighs, arms, and sacrum; and one of considerable magnitude over the left temple, which had already distorted the entire face—the eye being apparently diminished and humory, the lids tumefied, the inferior one with a prominent doubling in it; the conjunctiva pale and infiltrated, as well as the membrana nictitans, and caruncula lachrymalis. The skin and cellular membrane of this tumor, together with those on the extremities, became like that on the scapula—hard, insensible to the touch, and of a dark chocolate color—convincing us that the application of leeches to the original one was not instrumental in the production of the appearance—as we had then supposed. The right nostril was likewise contracted, and gummed with an inspissated discharge; and he complained of constriction of the throat, with difficulty in swallowing cold liquors, but not those previously warmed. On examination, the posterior fauces were found much inflamed, and nearly of the same purple hue as the tumors on the surface: the whole of which observed regular gradations from their commencement; first showing themselves not simultaneously, but in succession, by a slight discolored puffiness of the skin and cellular membrane, generally nearest to the bone. They were next observed, after a lapse of

twelve or fifteen hours, suffused over their entire surface, with a deep vermilion blush, which then changed rapidly into a dark brown, the integuments becoming thick and callous, with fissures, or superficial cracks, from which exuded a thin, acrid, corrosive sanies. These formed their characteristic appearances, without any very material deviation, or producing the slightest mitigation of suffering throughout, which had now become so excruciating as to baffle every effort of art to procure either sleep or rest: not even while in the warm bath has he had a moment's respite from pain.

His thirst, from the beginning, had been great, with a foul parched tongue; his pulse varying from 88 to 96, and full, but easily compressed; and the blood abstracted at the commencement of this disease appeared much attenuated, buffed, and deprived of the coagulating principle. His bowels (constantly attended to) were easily kept free, and his excretions, both urinary and alvine, were always natural in every respect; showing the alimentary canal to be perfectly healthy.

In this state he advanced into the morning of the 28th, his eleventh day under treatment, when several distinct warty pustules, considerably raised above the surface of the skin, were first observed on different parts of the body, very much resembling yaws, but particularly numerous and large over the right side of the neck and shoulders, and on the inside of the arms and thighs.

Several of the tumors already described, but particularly the one over the shoulders, appeared now to be running rapidly into gangrene, which had not been in the slightest degree arrested by the copious exhibition of tonics and antiseptics, and the powers of nature being at length almost exhausted, his pulse scarcely perceptible, his countenance frightfully haggard and livid, his entire surface bathed in a cold clammy sweat, and of a pale leaden hue, we expected every moment to be his last. He, however, held out, in a partial state of somnolency, and a low muttering delirium, until the morning of the 30th, when death released him from his misery, having been twelve days under treatment in the hospital.

Post mortem examination. Eighteen hours after death, the body was inspected by assistant surgeon Dr. Home, and myself, and presented the following appearances:

The entire surface exhibited a most unsightly deformity, with extreme emaciation, being nearly covered by black gangrenous tumors of various sizes, each surrounded by numerous small vesications, about the size of peas, which, with those over the neck, shoulder, arms, and thighs, at first sight resembled the yaw pustule, but on cutting into them they were found to be merely elevations of the cuticle filled with a dark violet colored inspissated lymph.

A strong suspicion having been recently entertained, that the causes and effects of this disease had their origin in glanders, it was considered essential, in the first instance, to have the absorbents of each arm minutely examined, to their termination in the axillary glands, in order fully to ascertain whether it might have been communicated, through their medium, to the system generally.

These vessels, however, as well as the glands, were found in their

natural state; nor was there the slightest appearance of either absorbent, glandular, or cutaneous inflammation; nor any recent cicatrices, chapped or scratched fingers, or, in short, the slightest breach of integument or abrasion of skin, by which absorption of morbid matter could have been facilitated into the system, anywhere discoverable.

The head was next examined; and on removing the scalp in the usual manner from the cranium, and thereby dividing the tumor already specified, we observed, immediately over the left superciliary ridge, a cluster of tuberculated bodies, of various sizes, imbedded in a lamina of the cellular tissue exterior to the pericranium.

At this stage of the dissection, the presence of our highly talented and much esteemed veterinary surgeon, Mr. Woodman, was solicited; and on his arrival, he unhesitatingly recognized "a strong resemblance between *these* and *those* usually found in the nasal linings of glandered horses after death."

The skullcap was now removed, and discovered the brain much more pale and soft than ordinary, with rather a larger proportion of fluid in the ventricles. But, on removing with the saw that portion of the cranium situated between the orbits, the schneiderian membrane lining the frontal sinuses and passages into the interior æthmoid cells, appeared throughout not only pale, thickened, and infiltrated, but in the right frontal sinus was another cluster of what Mr. Woodman considered to be "well defined ulcerated tubercles, and exactly similar in appearance to what we have in the membrane lining the frontal sinuses and other cavities of the head in *acute glanders* in the horse." Although, in this case of ours, the *ossæ spongiosæ* were free from their presence.

The posterior fauces were next examined, and found highly inflamed, of a dark purple color; and on the surface of the right tonsil there were four or five ulcerated patches of a similar character with the preceding. But neither the thoracic nor abdominal viscera presented any vestige of this formidable disease, all of which appeared perfectly sound, except that the tissues of the heart might be considered rather more pale and flabby than usual.

We now resumed the examination of the trunk, first inspecting a large, hard, cancerlike tumor, spreading backward over the scapular region, and downwards by the serratus and latissimus dorsi muscles, the most prominent part having cracked or separated previous to death, from which exuded a thin, highly fetid, ichorous sanies. And on cutting through this disorganized mass, down to the bone, the muscles appeared perfectly decomposed, and of a dark liver color, (exhaling a peculiarly fetid odor,) with points of purulent matter, as it were, infiltrated everywhere through its entire substance, resembling much a hepatized or tuberculated lung. And on removing the whole of this diseased mass from the bone, the scapula was observed nearly covered by a cluster of gray circular tubercles, the whole composed of fine cellular tissues, enclosed in small cysts, and firmly attached to the periosteum, differing only in this respect from those found on the pericranium.

The other tumors on the sacrum and extremities were all sepa-

rately examined, and exhibited precisely the same character and appearance with those already described—each covering a crop of tubercles adhering to the periosteum underneath, and proportionate in size and consistency to the extent and duration of the tumor.

The muscles generally, even those the most remote from the tumors, appeared blanched and flabby, the fibres softened, and the cellular membrane infiltrated with a yellow serosity. In short, the entire frame was here more or less contaminated.

Having now faithfully, and, I trust, clearly and concisely, detailed the most prominent features in the primary appearances, the progress, and the termination of this violent and extraordinary malady, I shall refrain from offering any opinion of my own, but leave it entirely to the reader to form his own conclusions, from the foregoing details.—*London Medical Gazette*, 1829.

Of some Symptoms in Children erroneously attributed to Congestion of the Brain.—I remember, when a boy, reading a story of two knights errant who arrived on the opposite sides of a pedestal surmounted by a shield; one declared it was gold, the other that it was silver; growing angry, they proceeded to blows, and after a long fight each was thrown on the opposite side of the shield to that where he began to fight—when both immediately detected their error; the knight who had said it was silver finding that on the opposite side it was gold, and the knight who had said it was gold finding that on the opposite side it was silver. This story, a little modified, is a good illustration of the state of medical opinion in this age, perhaps in all ages; medical men have no occasion to tilt, for they all throng on one and the same side of the shield; they look only at the golden side, and never dream of the possibility that on the opposite side it may be of a different metal.

In observing disease, two sets of symptoms may be noticed, which are mixed together in the case, but which require to be discriminated to form a correct opinion of it: the one consists of the striking symptoms, which form what may be called the physiognomy of the disease; the other consists of those symptoms which indicate the morbid state of organization on which the disease depends; the former only are noticed by the common observer, but the latter are the most important, and the skilful physician takes them for his guides in the treatment. “He notices not only where the hour hand of nature’s clock points, but also the run of its minute and second hands.”

Two patients complain occasionally of dimness of sight, swimming of the head, singing in the ears, and observe that if they turn the head on one side to look at an object, they feel as if they should fall; but the one is plump, florid, and has a full pulse; the other is pale and thin, has cold hands and feet, and a pulse small and feeble. One practitioner bleeds them both; the other bleeds the one, but does all he can to give blood to the other. The latter cures both his patients; the former cures the one, but ruins the health of the other: but such is the nature of the human mind, that the cases for a preconceived opinion are retained easier than those against it.

He remembers his good deed, forgets the other, or calls the case "anomalous," and marches on, without the slightest doubt that bleeding is the universal and sovereign remedy for dimness of sight, swimming of the head, and ringing of the ears, save and except only in "anomalous" cases.

I am anxious to call the attention of medical men to a disorder of children which I find invariably attributed to, and treated as, congestion or inflammation of the brain, but which I am convinced often depends on, or is connected with, the opposite state of circulation. It is chiefly indicated by heaviness of the head, and drowsiness: the age of the little patients whom I have seen in this state, has been from a few months to two or three years; they have been rather small of their age, and of delicate health, or they have been exposed to debilitating causes. The physician finds the child lying on its nurse's lap, unable or unwilling to raise its head, half asleep, one moment opening its eyes, and the next closing them again with a remarkable expression of languor. The tongue is slightly white, the skin is not hot, at times the nurse remarks that it is colder than natural; in some cases, there is at times a slight and transient flush: the bowels I have always seen already disturbed by purgatives, so that I can scarcely say what they are when left to themselves; thus the state which I am describing, is marked by heaviness of the head and drowsiness, without any signs of pain, great languor, and a total absence of all active febrile symptoms. The cases which I have seen, have invariably been attributed to congestion of the brain; and the remedies employed have been leeches, and cold lotions to the head, and purgatives, especially calomel. Under this treatment they have gradually become worse, the languor has increased, the deficiency of heat has become greater and more permanent, the pulse quicker and weaker, and at the end of a few days, or a week, or sometimes longer, the little patients have died, with symptoms apparently of exhaustion. In two cases, however, I have seen, during the last few hours, symptoms of oppressed brain, as coma, stertorous breathing, and dilated and motionless pupil.

I will relate a case as a specimen. A little girl, about two years old, small of her age, and very delicate, was taken ill with the symptoms which I have above described. She lay dozing, languid, with a cool skin, and a pulse rather weak, but not much quicker than natural. She had no disposition to take nourishment. Her sister having died only a week before of an illness which began exactly in the same way, and which was treated by leeches and purgatives; and some doubts having been entertained by the medical attendant of the propriety of the treatment, leeches were withheld, but the child not being better at the end of two days, the parents, naturally anxious about their only surviving child, consulted another practitioner. The case was immediately decided to be one of cerebral congestion, and three leeches were ordered to be applied to the head. As the nurse was going to apply them, and during the absence of the medical attendants, a friend called in who had been educated for physic, but had never practised it, and who had great

influence with the family: he saw the child, said that the doctors were not sufficiently active, and advised the number of the leeches to be doubled. Six, therefore, were applied; they bled copiously; but when the medical attendants assembled in the evening, they found the aspect of the case totally altered, and that for the worse: the child was deadly pale, it had scarcely any pulse, its skin was cold, the pupils were dilated and motionless when light was allowed to fall on them, and when a watch was held to its eyes it seemed not to see; there was no squinting. Did this state of vision depend on the pressure of a fluid effused into the brain since the bleeding, and during this exhausted and feeble state of circulation, or did it depend on the circulation of the brain being too languid to support the sensibility of the retina? It is well known that large losses of blood enfeeble vision. I saw a striking instance of this in a lady, who flooded to death. When I entered the chamber, she had no pulse, and she was tossing about in that restless state which is so fatal a sign in these terrific cases. She could still speak, asked whether I was come, (she knew I had been sent for,) and said "am I in any danger?—how dark the room is—I can't see." The shutters were open, the blind up, and the light from the window, facing the bed, fell strong on her face. I had the curiosity to lift the lid, and observe the state of the eye; the pupil was completely dilated, and perfectly motionless, though the light fell strong on it. Who can doubt that here the insensibility of the retina depended on the deficiency of its circulation? But to return to the little patient. The next day she had vomited her food several times; it was therefore directed that she should take no other nutriment than a dessert spoonful of ass's milk every hour, and this was strictly obeyed, and continued for several days. The child wasted, her features grew sharp, every now and then she looked fretful, and uttered a faint squeaking cry; the eyeballs became sunk in the socket, like those of a corpse that had been dead a month; the skin continued cool, and often cold, and the pulse weak, tremulous, and sometimes scarcely to be felt. Under this regimen, and in this way, she continued to go on for several days. At times she revived a little, so as to induce those who prescribed this treatment to believe confidently that she would recover, and she clearly regained her sight, for if a watch was held up to her, she would follow it with her eyes. She lived longer than I expected, a full week, and then died with the symptoms of exhaustion, not with those of oppressed brain. The head was opened by a surgeon accustomed to anatomical examinations, and nothing was found but a little more serum than is usual in the ventricles.

If the reader has perused the foregoing case attentively, and has reflected on it, he will of course draw his own inferences. I can draw no others than these, that the heaviness of head and drowsiness, which were attributed to congestion in the brain, really depended on a deficiency of nervous energy; that the bleeding and scanty diet aggravated this state, and insured the death of the child; also, that the state of the eye which so speedily followed the loss of

blood, and which resembled that occasioned by effusion, did in reality depend on a deficiency in the circulation of the brain, a fact of considerable curiosity and importance.

I will now relate a case similar in the symptoms, but very different in the treatment and result. I was going out of town one afternoon, last summer, when a gentleman drove up to my door in a coach, and entreated me to go and see his child, which he said had something the matter with its head, and that the medical gentleman of the family was in the house, just going to apply leeches. I went with him immediately, and when I entered the nursery, I found a child, ten months old, lying on its nurse's lap, exactly in the state I have already described; the same unwillingness to hold its head up, the same drowsiness, languor, absence of heat, and all symptoms of fever. The child was not small of its age, and had not been weak, but it had been weaned about two months, since which it had never thriven. The leeches had not been put on. I took the medical gentleman into another room, related to him the foregoing case, and several similar to it, which had been treated in the same way, and had died in the same way. Then I related to him a similar case which I had seen in the neighboring square, which had been treated with ammonia in decoction of bark and good diet, which had recovered; not slowly, so as to make it doubtful whether the treatment was the cause of the recovery, but so speedily that at the third visit I took my leave. He consented to postpone the leeches, and to pursue the plan which I recommended. We directed the gruel diet to be left off, and no other to be given than ass's milk, of which the child was to take, at least a pint and a half, and at most a quart, in the twenty-four hours. Its medicine was ten minims of the aromatic spirit of ammonia in a small draught every four hours. When we met the next day, the appearance of the child proved that our measures had been right; the nurse was walking about the nursery with it upright in her arms. It looked happy and laughing; the same plan was continued another day; the next day it was so well that I took my leave, merely directing the ammonia to be given at longer intervals, and thus gradually withdrawn, the ass's milk to be continued, which kept the bowels sufficiently open, without aperient medicine.

So inveterate is the disposition to attribute drowsiness in children to congestion of the brain, and to treat it so, that I have seen an infant, four months old, half dead from the diarrhœa produced by artificial food, and capable of being saved only by cordials, aromatics, and a breast of milk; but because it lay dozing on its nurse's lap, two leeches had been put on the temples, and this by a practitioner of more than average sense and knowledge. I took off the leeches, stopped the bleeding of the bites, and attempted nothing but to restrain the diarrhœa, and get in plenty of nature's nutriment, and as I succeeded in this, the drowsiness went off, and the child revived. If it could have reasoned and spoken, it would have told this practitioner how wrong he was; any one, who from long defect in the organs of nutrition, is reduced so that he has neither flesh on his body, nor blood in his veins, well knows what it is to

lay down his head and doze away half the day without any congestion or inflammation of his brain. This error, although I have specified it only in a particular complaint of children, may be observed in our notions and treatment of other diseases, and at other periods of life. If a woman has a profuse hæmorrhage after delivery, she will probably have a distressing headache, with throbbing in the head, noises in the ears, a colorless complexion, and a quick, weak, often thrilling pulse, all which symptoms are greatly increased by any exertion. I have seen this state treated in various ways, by small opiates, gentle aperients, and unstimulating nourishment, with no relief. I have seen blood taken away from the head, and it has afforded relief for a few hours, but then the headache, throbbing, and noises, have returned worse than ever; the truth is, that this is the acute state of what in a minor degree and in a more chronic form occurs in chlorosis, by which I mean pale faced amenorrhœa, whether at puberty or in after life. It may be called *acute chlorosis*, and like that disease, is best cured by steel, given at first in small doses, gradually increased, merely obviating constipation by aloetic aperients.

I shall not encumber this paper with a multiplicity of cases, but state that the above are only specimens of a class, of which I have seen enough to convince me that they deserve the attention of the profession. If I had any doubt about this, this doubt would be removed by the fact that Dr. Marshall Hall has already recognized them,* and described them in a paper which has been read at the Medico-Chirurgical Society.† He has therefore anticipated me in announcing them, but so far from regretting this, I am glad to support my statements by the authority of so observing and reflecting a physician. The only difference between our experience seems to be this—that he attributes the state which I have been describing to the diarrhœa produced by weaning, or to the application of leeches

* Since the above was in type, and just before striking it off, I found the following passage in Dr. Abercrombie's *Researches on the Brain*, page 310. "I have many times seen children lie for a day or two in this kind of stupor, and recover under the use of wine and nourishment. It is often scarcely to be distinguished from the coma, which accompanies diseases of the brain. It attacks them after some continuance of exhausting diseases, such as tedious and neglected diarrhœa; and the patients lie in a state of insensibility, the pupils dilated, the eyes open and insensible, the face pale, and the pulse feeble. It may continue for a day or two, and terminate favorably, or it may be fatal. This affection appears to correspond with the apoplexia ex inanitione of the older writers. It differs from syncope in coming on gradually, and in continuing a considerable time, perhaps a day or two; and it is not, like syncope, induced by sudden and temporary causes, but by causes of gradual exhaustion going on for a considerable time. It differs from mere exhaustion in the complete abolition of sense and motion, while the pulse can be felt distinctly, and is, in some cases, of tolerable strength." It does not appear that Dr. Abercrombie opened the heads of any of these children, and therefore it is doubtful what was the state of the brain with regard to the blood vessels and the fluid in its ventricles.

† A short report of the paper will be found in the *London Medical Gazette* for 1829.

for some previous complaint. In most of the cases I have seen, however, the child has had no previous illness, and the leeches have been applied subsequent to the drowsiness, and as a remedy for it.

The children who were the subjects of this affection, and were thus treated, died not with symptoms of oppressed brain, but with those of exhaustion, and on examining the head after death, the blood vessels were unusually empty, and the fluid in the ventricles rather in excess; in two instances death was preceded by symptoms of effusion, viz., blindness, a dilated pupil, coma, and convulsions; and after death the ventricles were found distended with fluid to the amount of several ounces, the sinuses and veins of the brain being remarkably empty. I believe the prevalent notion of the profession is, that all sudden effusions of water into the brain are the result of inflammatory action; but putting aside for a moment this dogma of the schools, consider the circumstances of this case. For several days before death, all that part of the circulating system, which was cognizable to the senses, was at the lowest ebb consistent with life, and after death the blood vessels of the brain were found remarkably empty of blood, and the ventricles unusually full of water. From such facts I can draw no other inference than this, that this sudden effusion was a passive exudation from the exhalents of the ventricles, occasioned by a state of circulation the very opposite to congestion or inflammation. This is corroborated by the dissection of animals which have been bled to death. Drs. Saunders and Seeds, of Edinburgh, found that in animals bled to death, whether from veins or arteries, there was found more or less of serous effusion within the head, and Dr. Kelly thus expresses himself. "If, instead of bleeding usque ad mortem, we were to bleed animals more sparingly and repeatedly, I have no doubt that we should succeed in draining the brain of a much larger quantity of its red blood; but in such experiments we shall, I think, find a larger effusion of serum." * * * * "Though we cannot, by general depletion, entirely or nearly empty the vascular system of the brain as we can the vessels of other parts of the body, it is yet possible, by profuse hæmorrhages, to drain it of a sensible portion of its red blood, that the place of this spoliation seems to be supplied both by extra and intra vascular serum, and that watery effusion within the head is a pretty constant concomitant or consequence of great sanguineous depletion."* But if this is true, it is of great practical importance, for if we take delicate feeble children, and by bleeding and purging for an imaginary congestion of the brain, reduce their circulation to a very low ebb, and keep it so, we run the risk of producing that very effusion of serum into the brain which we are endeavoring by our remedies to prevent. The following

* Kelly on the Pathology of the Brain. Transactions of the Medico-Chirurgical Society of Edinburgh. 1828. Part I.

Dr. Kelly found that the loss of blood required to kill an animal of a given size was very uniform. A sheep required from 34 to 38 ounces; a dog weighing 20 pounds, was killed by the loss of 15 ounces; another, weighing between 40 and 50 pounds, was killed by the loss of 37 ounces; another, weighing 18 pounds, was killed by the loss of 11 ounces.

case, though I would not cite it as one of the class which I am describing, still bears upon the question of passive effusion into the brain.

A little girl, about three years old, small of her age, delicate in health, and wayward in disposition, was taken ill with the following symptoms: she could not hold her head up, lay dozing, for the most part, and complained occasionally of momentary pain at the top of the head. Her skin was cool, she had little disposition for food, her pulse was 76, not intermitting but irregular; neither light nor noise were disagreeable to her. Leeches were applied to the temple twice, and she was purged daily, but the treatment, after a week, had afforded no relief to the symptoms. The vertex was now shaved, and six leeches applied where she complained of pain, a cold lotion was applied frequently to the vertex, and she took a grain of calomel every four hours for two days. The leeches bled well, and the calomel operated freely, but without affording any relief to the symptoms; the pulse too lost its slowness and irregularity; it became weak and quick, above 130. In this state the little girl, still continuing to complain of pain in her head, six more leeches were applied to the vertex, making in all two dozen, and purging was continued. The next day she appeared much altered; she was pale and cold, and fainted on being raised. Depleting remedies were now altogether discontinued, and her diet was mended though liquid, but she continued weak and faint, and the next day was convulsed. She was insensible, her limbs were stiff, her eyes drawn to the left side, not both eyes turned towards the nose, but both turned to the left. As she could not swallow, all that was done was to warm her, for she was cold, and to inject a glyster containing spirits of turpentine. After a few hours the convulsions ceased, she came to herself with perfect vision; and the natural appearance of the eye; she talked, took nutriment, but still complained occasionally of pain on the head. The next day she was so much better that there seemed a fair prospect of her recovery. She was at this time taking no medicine, and feeding on equal parts of gruel and milk, or gruel and veal broth. As two days had passed without the bowels being moved, a solution of salts in infusion of senna was given, and this not operating after eight hours, she took two drachms of the compound decoction of aloes. The next morning she had one stool, but that an enormous one, and soon afterwards became comatose, with a dilated pupil, stertorous breathing, and palsy of the left side. In the evening she died; two weeks and three days from the beginning of her illness. The next morning the head was opened by Mr. King, of Regent street, formerly Interne at the Hôtel Dieu at Paris, and teacher of anatomy, to whom I am indebted for several valuable dissections: the following are his notes of examination. The vessels of the dura mater were quite empty; along the two posterior thirds of the superior longitudinal sinus, the two plates of the arachnoid membrane adhered by a white substance like cheese; it was limited to the extent of the sinus laterally; there was no injection in the vicinity of this lymph; the sinuses were empty; the veins of the pia mater were

remarkably empty, and this membrane was pale; the substance of the brain was remarkably pale; under the arachnoid membrane a thin stratum of limpid serum was effused. The ventricles were full of the same fluid, and a little distended by it. In all, there was not more than an ounce and a half of serum. On the surface of the ventricles two or three veins rather large were evident.

How far our opinion about the nature of the case may be modified by the white cheesy substance in the arachnoid membrane; whether the mode of treatment was wrong, or, on the contrary, right, but not prompt and active enough; on these points I shall not offer a conjecture; but when I consider, 1st, the low ebb at which the circulation was kept for several days before death; 2d, the emptiness of the blood vessels of the brain discovered after death; and 3d, that the symptoms of oppressed brain did not occur more than twelve hours before death, I cannot refrain from inferring that this sudden effusion of water was not an active exudation from vessels in a state of congestion, but a passive exudation from empty and feeble exhalents.

I do not expect that medical men will take my word as conclusive evidence for the truth of this paper, neither do I wish it; all I ask is that they will allow my observations and reasonings to induce them to look out for similar cases, and judge for themselves. With regard to the point that heaviness of head and drowsiness in children often depend not on congestion, but on deficiency of nervous power, and require for their cure not depletion, but support, I am quite satisfied that candid observers will find that I am right. With regard to the other point, that sudden effusion of serum may take place in the brain from a state of the circulation, the opposite to congestion or inflammation, it is more likely, even if true, to be overlooked; for such is the force of preconceived opinion, and such the prevalent notions on the subject, that the following will be the process in most minds. A child has been suffering some obscure symptoms for many days, when suddenly and unexpectedly it becomes blind, its pupils are dilated and motionless, it becomes convulsed, comatose, and dies. On opening the head, serum is found in the ventricles, and, without any further enquiry, it is immediately taken for granted, that this effusion was the effect of overlooked inflammation of the brain, and regret is felt that active depletion had not been employed; the inference may be a correct one; all I contend for is, that it should not be taken for granted, but that those circumstances should be minutely enquired into, which throw light on the state of the circulation in which the effusion occurred.

It is surely impossible for the reader to mistake me so far as to suppose, that I am denying the important practical truths, that heaviness of head and drowsiness in children commonly depend on congestion, and are to be relieved by depletion, and that acute hydrocephalus is a serous effusion, the result of inflammation, and capable of being cured only in the inflammatory stage by bleeding and purging. These vital truths I would state as strongly as any man, but there are opposite truths. All that I mean is, that these symptoms sometimes depend, not on congestion, which is to be

relieved by bleeding, but on deficient nervous power, which is to be relieved by sustaining remedies. All I advise is, that not only the heaviness of head and drowsiness should be noticed, but the accompanying symptoms also, and that a drowsy child, who is languid, feeble, cool, or even cold, with a quick weak pulse, should not be treated by bleeding, starving, and purging, like a drowsy child who is strong, plethoric, has a flushed face, perhaps swelled gums, and a heated skin. The cases I have been describing "may not improperly be compared to certain species of plants, by no means uncommon, which are liable to be confounded with others by an inattentive observer."*

SURGERY.

Extirpation of the left Ovarium.—A woman, 38 years of age, had borne five children in the space of seven years. After her fourth delivery she suffered from inflammation of the womb: from that period she complained of a dull pain in the left side of the hypogastrium, and about a year and a half after her last confinement, she perceived a small tumefaction on the left side: a few sulphur baths caused it nearly to disappear for a time, but latterly it had extended over the abdomen. Two years subsequently to this, her menses were followed by a malignant fluor albus, which added to the debility already induced. Dr. Chrymer having decided on the nature of the affection, and the patient having consented to the operation, it was performed by making an incision from the xyphoid cartilage to the pubes, leaving the navel to the right; the opening made into the peritoneum caused a prolapsus of a great part of the intestines; they were immediately enveloped in a warm and moist cloth. The adhesions of the tumor to the peritoneum and to the edge of the pelvis were then divided, a double ligature was applied to the pedicle of the tumor attached to the broad ligament, which was divided an inch below the ligature. The intestines, which had been wrapped in the towel about five or six minutes, were then replaced within the abdomen, the serosity accumulated in the pelvis was wiped off with a sponge, and the wound closed by suture. The operation lasted a quarter of an hour, and the patient lost only a few ounces of blood; an emulsion, containing nitre, was ordered immediately, and hiccup with cold shivering showing themselves after some little time, some doses of laudanum were administered. The cure was not interrupted by any accident, and at the end of six weeks the woman returned to her native place. Since this operation she has borne a healthy child. The tumor weighed eight pounds, exceeded in size the head of a child, was irregular on its surface, livid in some places, and within, presented cavities, some filled with a fluid of the consistence of honey, and others with a greenish and sanious liquid.—*Graefe and Walthe's Journal.*

* Abernethy's Works, Preface, p. 7.

Five cases (of which the above is the fourth) wherein operations for the extirpation of diseased ovaria were either attempted, or actually performed, are published in the "Archives Générales" for May. The above case was successful. In the first the tumor was so attached that the extirpation could not be performed; the abdomen was therefore closed, and the woman escaped with difficulty from the consequences; the second, the patient died thirty-six hours after the operation; the third case also perished at the same period. In the fifth case the tumor was so firmly adherent that it could not be removed, but the operator cut away the sac, and was under the necessity of securing some arterial branches: the woman died in thirty-six hours.—*London Medical Gazette.*

Nævus Maternus cured by Vaccination—Catherine Strathern, eight months old, was brought to the hospital (Glasgow Royal Infirmary) in the month of September, having a nævus on the lower part of the forehead, half an inch above the left inner canthus. It was observed at birth, and was then quite level with the surface. After a month it became elevated. Having never been vaccinated, fresh lymph was inserted, by minute punctures, both around the circumference and over the whole extent of the tumor. On the eighth day many small pustules were visible, and by the twelfth they had coalesced, and become incrustated. On the 21st the scab separated, leaving the surface underneath tender and slightly prominent. A second crust succeeded, and to this a third and a fourth; a perfect cure being effected in about six weeks.

I perfectly agree with those who have made trial of this practice, that it is indispensable to the ultimate success of the case, that the lymph should be freely introduced over the diseased surface, as well as around its circumference. In this way, the adhesive inflammation which is excited, appears to extend from one pustule to another, and in the course of a few days the whole becomes involved in one scab.—*Ibid.*

Aneurism of the Brachial Artery from Wound during Bleeding.—Some interesting and instructive cases of the above accident, for accident we suppose it may be generally called, have been contributed by Mr. Smith, senior surgeon to the Bristol Hospital, in the first number of the Provincial Medical Gazette. The paper in question has oddly enough been headed, a "Letter on Bloodletting," though with ordinary bloodletting it has very little indeed to do.

Case 1. About two years ago, Mr. Smith was summoned to a patient in great haste, in consequence of an apprentice having opened the brachial artery with a lancet, in mistake for the vein. When Mr. S. arrived, the patient had lost a large quantity of blood, though the hæmorrhage had been arrested by the tourniquet. Mr. Smith cleaned the orifice and arm, and accurately closed the former by placing over it a small button like compress, secured by adhesive straps and well regulated pressure. The tourniquet was then slackened, and the man sent to bed. The bowels were opened, and in two or three days, there being some febrile excitement, the patient

was copiously bled, but the arm was left undisturbed for a fortnight, when the pressure was removed. No tumor had appeared, an adhesive strap was reapplied pretty tight, to serve as a support, and from that time to this Mr. Smith has heard nothing of the patient.

Case 2. On the 15th of April, our author was summoned to a stout healthy workman, whose right brachial artery had been opened instead of the vein. The hæmorrhage had been very profuse, but a tourniquet was applied, and before Mr. Smith's arrival (three hours and a half after the accident) it was checked. The instrument had been screwed so tight that the man was in excessive torture, and the arm extremely swollen and livid. This case was treated in a similar manner with the former, and then the tourniquet gradually loosened, when the circulation was restored, and the pain by degrees disappeared. The bandage was cautiously tightened from time to time, and on the 2d of May every thing was removed. No tumor existed, and the man was directed not to use the arm roughly, an adhesive strap being placed around it as a measure of precaution. Mr. Smith has since learned, that the man experiences no inconvenience in the part injured.

"I might relate other cases in my own practice, or that of my friends, of the same kind, amply sufficient to show that *well regulated* pressure will generally succeed in preventing the formation of aneurism. Doubtless, occasionally, it will fail, and we have had many cases of brachial aneurism sent to the infirmary from various quarters, in some of which, very likely, pressure had been properly applied."

The two cases above detailed were certainly more favorable cases for the employment of pressure than those where the artery is punctured through the vein. We can see no good reason why pressure, properly applied, should not prevent the egress of blood from, and effect the healing of a clean cut in a vessel so much under our command as the brachial. Reasoning, *à priori*, would naturally lead us to this conclusion, and the experience of surgeons, Mr. Smith's, for instance, goes to establish its correctness. When, however, both vein and artery are wounded, pressure, however employed, will, beyond all doubt, be often unavailing in *preventing* the formation of one or other of the different species of aneurism which follow this particular injury, and if the aneurism be actually formed, it will very seldom suffice to *cure* it. Mr. Colles, we believe, of Dublin, succeeded in curing a circumscribed aneurism of the brachial artery after bleeding, but such cases are much too like angels' visits—few and far between. The following presented some unusual symptoms, and deserves to be recorded.

Case 3. A schoolmaster, twenty-four years of age, of irritable temperament, residing the other side of the Severn, had his brachial artery wounded in bleeding, when the operator, aware of what had happened, bound a large quantity of lint on the orifice. The blood forced its way to the cellular membrane, and shortly afterwards, when the external wound was healed, a pulsating tumor made its appearance, and in the course of six weeks had acquired the size of a hen's egg. He was now admitted into the Bristol Infirmary,

and next day the operation was performed of tying the brachial artery above. One of Mr. Smith's colleagues happening to have a finger on the tumor at the time that the incision was made through the integuments, informed him that the pulsation had instantly ceased on that being done. It was gone, too, from the wrist, although the pulsations in the other arm were strong, and the patient by no means in a state of syncope. The operation was continued and a ligature applied round what seemed to be the artery, but not secured, as no pulsation was presented by the vessel.

"For the purpose of restoring the circulation, the arm was plunged into hot water, renewed from time to time for an hour; but our efforts were unsuccessful. The lips of the wound were now approximated a little with adhesive plaster, the ligature being left as before, and the man covered up warm, and placed on his bed by the fire of the consultation room, which opens into the operation theatre. All this occupied the space of time between one and half past two. The man went to sleep, and was pretty comfortable, but the pulsation did not return till about seven o'clock, when it was pretty strong both in the tumor and at the wrist; and I had the satisfaction to find that a pull at the ligature checked it immediately and effectually. Assured thus that all was right, I made a knot, and tied the artery. The wound was then treated in the ordinary way, and my patient had a good night, and suffered but little.

"In nine days the ligature came away without a drop of blood, the wound was rapidly closing, and I flattered myself that all was well. Shortly after, however, he became attacked with erysipelas, spreading from the affected arm over nearly the whole of the trunk of the body, which occasioned suppuration in the cellular membrane of the limb, and sphacelus of some portion of its integuments; and considerably undermined his general health. When he was getting out of this, on the thirtieth day from the operation, there was a sudden and immense flow of blood through the wound where the vessel had been tied, which, in all probability, would have proved fatal, but for the accidental presence of a pupil. It was now judged expedient to amputate the arm, which I did immediately, a colleague commanding the artery by pressure, as there was no room for the tourniquet. The poor fellow bore it with more fortitude than I had anticipated, and after the operation said, 'Well sir, *now* I hope I shall get well.' In this hope you will readily believe I heartily joined, and I had indeed the pleasure of seeing him daily recovering for a fortnight or more, when he was suddenly, and without any ascertainable cause, seized with convulsions, and, in half an hour, a period was put to his sufferings.

"Upon examining the limb, we discovered that the brachial artery had ulcerated at the spot where the ligature had been applied. The aneurismal tumor was reduced to the size of a filbert."

This is certainly a puzzling as well as an unfortunate case, and the facts are all that are required, for commentary would be little else than conjecture. Mr. Smith, in concluding his "letter," mentions the particulars of the case of a young woman who plunged a

sharp knife into the palm of her hand. A surgeon failed to discover the bleeding orifice, but by pressing with his single finger in various directions, Mr. S. at last hit upon one spot which commanded the hæmorrhage. Pressure on the bleeding surface itself, by means of a firm ball of rolled lint, compressers, and roller, was employed, and with perfect ultimate success.

Before leaving the subject of wounds of the palm of the hand, we may just allude to a case which occurred to Mr. Palmer, a very intelligent young surgeon, of Suffolk Place, and which has been published by him in the London Medical Gazette.

Case. W. Hall, æt. 28, a respectable tradesman, punctured with the point of a sharp leather knife, the ulno-carpal artery in the palm of the hand, about an inch beyond the pisiform bone. The wound was small, but bled profusely; it was bandaged up for the ten following days, by which time it had perfectly cicatrized, and he took no farther notice of it, until, a few days afterwards, he observed a small pulsating tumor in the site of the cicatrix. On the 9th of June, when Mr. Palmer saw him, the tumor was as large as a small walnut, and had a strong pulsation, which appeared to be daily increasing, and was not stopped except by the simultaneous compression of the ulnar and radial arteries. On the 12th of June, after having placed a tourniquet upon the arm, Mr. P. made an incision, about two inches and a half in length over the centre of the tumor, and immediately secured the ulnar artery where it entered into it. The sac was then opened, but on slackening the tourniquet a strong jet of blood issued forth, and the point of a small probe not readily discovering the oppositè orifice of the vessel, the latter was dissected for externally, found, and secured. Still, however, notwithstanding the branches of supply were thus tied above and below, a considerable hæmorrhage issued from the sac, and on loosening the tourniquet a second time, and finding it impossible to discover the bleeding vessel in the bottom of the wound, Mr. P. passed a double ligature beneath the sac, and tied its two ends above and below, including the sac between the knots. The hæmorrhage was by this means completely arrested—the wound was lightly dressed—the last ligature taken away on the 30th, and on the 7th of the following month the cicatrix was perfect.

We fully agree with Mr. Palmer in thinking that the proceeding he adopted was infinitely preferable to tying the radial and ulnar arteries, because it struck at once at the root of the affection, was much more certain in its effects, and was one operation instead of two. It is quite a mistake to suppose that the ordinary operation for aneurism in the course of a large vessel is applicable to all the affections in the smaller ramifications, and so surgeons are beginning to find it.—*Medico-Chirurgical Review.*

Extirpation of the Parotid Gland.—Though the fact of the entire extirpation of this gland is now determined beyond dispute, the operation appears to be almost discountenanced by many surgeons,*

* Allan Burns, Boyer, and Richerand, have all expressed themselves strongly against it.

as not likely to be of any important advantage, in consequence of the difficulties attached to its performance, and the danger and uncertainty of result which have hitherto attended it. In fact, the manner in which I have heard it spoken of by some anatomists, is calculated to deter any one from attempting it; viz. by way of giving an idea of its difficulty, they suggest an attempt at extraction, after the gland is injected with quicksilver, without opening any of its convolutions, and allowing the escape of the fluid. Now, besides that the healthy condition of the gland is widely different from its scirrhus state, the induration of which might, I conceive, rather facilitate its entire removal, no one would set about it with the idea of turning it out sound, and untouched by the scalpel. It may be wholly removed, with tolerable facility, in the dead body, by successive layers, and picking away the more deeply situated portions with the forceps and scissors. I have no intention in mentioning this of drawing any parallel between the facility of operations on the dead body and living subject. The practicability of the latter will, I think, be fully proved by the cases contained in the following thesis, on extirpation of the parotid gland, presented and sustained by Antonie Auguste Pillet, of Lyons, at the Faculty of Medicine of Paris, June 16th, 1828. Addressed to M. Gensoul.

M. Pillet commences by a retrospect of the numerous instances of the performance of this operation, published in the course of the eighteenth century; and comes to the same conclusion as Richter, that, as many of their authors have omitted to particularize the parts interested in the operation, we may fairly presume that the operators have been led to suppose they had abstracted the parotid, when they had merely dissected out an enlarged lymphatic gland, or other tumors situated upon it.

M. P. believes this to have been the case in the observations recorded by Verduin, Gooch, Behr, Palfin, and Scultetus; and considers his opinion confirmed by a passage in one of the authors on this subject, where he announces that hæmorrhage never follows ablation of the salivary glands, and regards as perfectly useless the precautionary means adopted against it. "But if we decide on rejecting the authenticity of these operations, at least as instances of total extirpation, what can we think (asks M. P.) of analogous cases by authors combining profound anatomical knowledge with surgical talents? Of those of Heister? who first laid down precise ideas on the operation; and who cites, in proof of its possibility, the case of a student on whom it was performed, but who died three days afterwards of hæmorrhage from a wound of the carotid, which the operator was either unable or too timid to arrest.* Of the testimony of Acrell† and Siebold‡ both of whom have recorded successful cases. And of Souscrampe's operation; to be met with in the 84th vol. of the *Journal de Médecine*? These facts, too, have been rejected by the generality of surgeons, believing that enlarged

* Vide *Commercium Litterarium Norimbergæ*, An. 1733, p. 61.

† *Comment. Lepsisæ*, Supplem. p. 659.

‡ C. G. Siebold, *Parot. schirros. felic. ext. hist. Erfurti*. 1781.

glands, or other tumors, have been mistaken for the parotid, which being compressed, nearly wasted, and concealed behind the maxilla, had escaped the bistoury. In support of this opinion, a circumstance which occurred to Boyer is cited. Having removed a tumor, as large as the fist, situated in the region of the parotid, he penetrated so deep, and tied so many vessels, that he concluded he had taken away the parotid; till, on carefully exploring the cavity, he recognized that gland very distinctly, remaining untouched behind the posterior border of the jaw. And another professor of this school affirms that the operation has never been performed. Struck by the contrariety of opinion on a question apparently so easy of solution, I thought it would not be without interest to collect some recent instances of the operation, performed by surgeons whose ability and good faith could not be suspected; and to add the pathological results gathered from the fatal cases, in order to throw their united light upon this point of operative surgery. Setting aside, therefore, all the operations recorded during the last century, as nearly all liable to furnish matter for cavil, a sufficient number still remains as ample testimony in its favor.

“No one, I conceive, will question the authenticity of the operation performed by Beclard, in 1823.* The patient died a few days afterwards; and it was readily ascertained that the surgeon had not deceived himself. The year following it was repeated by M. Gensoul, and a second time in 1826; successfully in both instances. The next two that present themselves, by Klein of Stuttgart, and Prieger † of Kreuznach, reported in Graeffe and Walther’s Journal, bear a great resemblance to those above mentioned by Verduin and Scultetus, and may be passed over as doubtful. In England, however, Mr. Goodlad, of Bury, has lately extirpated this gland, forming an immense tumor at the left side of the face and neck; pre-facing the operation by the ligature of the carotid. The cure was not lasting. The patient sunk under a return of the disease, fifteen months afterwards.‡ A case of the same nature occurred to Mr. Carmichael, with successful result; but leaving paralysis of the muscles of that side of the face.§ In France the operation has been lately practiced by M. Lisfranc,|| 1826; and the same year by M. Idrae, of Tolhouse. In the former, death took place on the sixteenth day after the operation; ¶ and the examination, conducted in the presence of the members of the Academy of Surgery, completely satisfied them as to the fact. As to the operation of M. Idrae, published in the *Ephemerides Medicales de Montpellier*, the

* Archives Gen. 1824. Johnson’s Journal, June, 1824.

† A second case by Dr. Prieger, is published in the 2d No. of Rust’s Magazine for 1825, and given from Dr. Johnson’s Journal for July 1826, at the end of this thesis; of the authenticity of which there can scarcely be a question.

‡ Med. Chir. Trans. Vol. 7.

§ Trans. of King’s and Queen’s College. Vol. 2d, Dublin.

|| Revue. Med. 1826. Johnson’s Journal, April, 1827.

¶ From ulceration in the coats of the stomach, the wound being very nearly healed.

extirpation of the entire parotid may appear somewhat doubtful. It is not easy to comprehend how M. Idrae could have carried into execution the deep dissection he describes, without opening a vessel or needing a ligature, except to the central pedicle of the tumor, in which pulsation was felt; unless either the parotid itself had been singularly flattened and forced inwards, and thus overlooked, or the vessels had been obliterated by the pressure, of which circumstance M. Lisfranc alone has made mention."

M. Pillet next goes through the anatomical relations and structure of the gland; and then speaks of other methods of extirpation, described by several surgeons. Of that by a single ligature, proposed and executed by Rookhuysen; and by numerous ligatures, practised by a Swiss surgeon, both probably for tumors of lymphatic glands. Of the use of caustic, also, recommended by Desault and Chopard, but attended by too great inconveniences to be adopted in practice.

Having taken this survey of the history of the operation, the author proceeds to the detail of the two operations of M. Gensoul, from notes furnished by himself.

The first case is that of "Jean Michel Fauce, aged 63, a manufacturer, of Lyons; of a strong constitution, and sanguine temperament. He first perceived the tumor over the right parotid, April, 1824; it was then about the size of a bean, and remained stationary for a short time. It soon, however, made rapid progress; the skin became red, ulcerated, and a greyish sanies was poured forth.

"At his entrance into the Hôtel Dieu, July 16th, 1824, the tumor had acquired the size of a hen's egg, and was the seat of such severe pains as to deprive him of sleep entirely. It did not appear adherent to the parotid. A limpid serous fluid was constantly discharging from some fistulous orifices at its upper part. I plunged a lancet into a point where fluctuation was manifest, and gave exit to a small quantity of blood mingled with streaks of a grey matter. Some days afterwards, the man suffering but little, believed himself cured, and left the hospital contrary to my wishes; but, as I had foreseen, soon reentered it, on the 4th of September following. The tumor, having been improperly irritated by topical applications, had then acquired a more considerable volume; the edges of the ulcer were tumid, everted, and of a greyish aspect; and furnishing a fœtid sanies in abundance. The tumor, before moveable, now seemed fixed to the parotid, which was itself enlarged, and very painful—compared by the patient to needles plunged into the part. I directed some leeches to be applied round the gland, and repeated them some days afterwards, with the effect of reducing the surrounding swelling a little, but not checking the progress of the disease. Sloughs formed upon the ulcer, now daily increasing, and exhaling the peculiar odor of cancerous affections. The rapid increase of the ulceration, and the sufferings and despair of the man, prevailed on me to yield to his entreaties, and decide upon attempting the extirpation of the disease; and I proceeded to perform it on the 20th of September, 1824. Having placed the

patient conveniently, I surrounded the tumor by two semi-elliptical incisions, of six inches in length, in the long diameter of the gland, leaving an interval of three inches in the middle between them. After having separated the tumor from the masseter, the edge of the lower jaw, and the mastoid apophysis, I endeavored in vain to break through its deep adhesions. The blood now flowed profusely; and the size of the tumor interfering with the dissection at its base, I detached that portion which was free, while the fingers of my assistants restrained the hæmorrhage. The dissection was continued with the aid of a director and the nails; and lastly, what remained of the gland was seized by the forceps, and cut away by the scissors, curved in their flat direction.

“Eleven arteries were tied successively, including the external carotid. The facility with which I was able to pass my fingers over the masseter, pterygoid, and sterno-mastoid muscles, the posterior border of the jaw, and the styloid and mastoid processes, satisfied me beyond doubt that I had abstracted the entire parotid. I then brought together the lips of the wound, and retained them in contact by adhesive straps, and directed the application of very cold water frequently, to moderate the intensity of the inflammation. The tumor was composed of a mass of gangliform tubercles, of greyish structure, lardaceous, and elastic; some of them softened, and containing fluid. Beneath them a decidedly scirrhus structure presented itself; and beyond that some glandular granules of the parotid were recognized, slightly increased in volume. The trunk of the facial nerve was seen on the posterior surface of the tumor; and at its anterior border, a portion of the stononian duct. The wound proceeded regularly towards cicatrization; and when the patient left the hospital, October 28th, it was reduced to the size of a ten sous piece. Some fungous vegetation on the surface obliged Fauce to return, November 11th; and I immediately cleared away every particle which appeared of a scirrhus character. After the healing of this wound, however, lancinating pains and induration were perceived in front of the tragus; and the anterior part of the cartilage of the meatus auditorius, together with the tragus, were removed.

“The effect of this proceeding was the disappearance of the pains, and the perfect cicatrization of the wound; and he finally left the hospital, Jan 9th, 1825. The muscles of the face on that side were paralyzed, but not completely, and he appeared to regain power daily.

“Fauce had scarcely left the hospital, when he determined, as he said, to celebrate his recovery; and, abandoning himself to his favorite liquor, eau de vie, he gave himself up to most complete drunkenness some days. It was not long before a severe inflammation of the gastro-hepatic apparatus developed itself; and after suffering the consequences of his imprudence for some months, he sank under the disease, June 16th, 1825, six months after the healing of the wound.

“The dissection exhibited a fibrous substance behind the angle of the jaw, supporting the cicatrix; the meatus auditorious, facial

nerve, carotid artery, and parotid duct, divided as described above; and not the smallest vestige of the parotid gland.

"I removed the gland on the opposite side, for the sake of comparison, and it was impossible to discover any sensible difference between one side and the other.

"The gastro-duodenal mucous membrane was of a reddish violet color. The liver much enlarged, and filled with tubercles, some of them softened, and containing fluid similar to the yolk of an egg. The heart was small; the large vessels strongly injected."

The second case is as follows: "Eleonore Torque, aged 39, of strong constitution, and habitually regular, having enjoyed perfect health all her life, became aware, at the commencement of 1821, of the existence of a tumor in front of the lobule of the left ear, at that time as large as a nut. It was moveable beneath the skin, which was not altered in color, and pressure gave no pain.

"After some time it increased considerably, and she consulted several physicians of Grenoble and Lyons ineffectually. Very shortly, acute pains shot through the tumor; and it augmented in size to such a degree, that she determined upon entering the wards of the Hôtel Dieu, April, 1826, and to undergo any operation which might be necessary. It was now as large as the double fist, hard, unequal, indolent, and without any alteration in the color of the skin, and extending from the zygomatic process over the superior third of the neck.

"I proceeded to the operation, April 17th, in presence of several distinguished surgeons of this city, and a great number of pupils.

"Taking my station on the left side, with a convex bistoury, I made a vertical incision, of seven inches in length, from the zygoma to a point about two inches below the angle of the jaw, through the skin, which I dissected back carefully. Having thus exposed the tumor, it was raised with a hook; its circumference adhered to the neighboring parts by loose cellular tissue, through which I dissected from below upwards, with much circumspection. Notwithstanding all my care, the external carotid was divided, and having placed a ligature upon it, the operation was completed without the interruption of any other accident. The deep cavity left by the abstraction of the tumor, presented, in front, the masseter; behind, the anterior border of the sterno-mastoid muscle; superiorly, it was bounded by the zygoma; in the depth of the cavity, and below, the finger came in contact with the styloid process, and the muscles attached to it. The internal carotid artery, the internal jugular vein, and pneumogastric nerve, were exposed, near their entry into the base of the skull. The nerve of the seventh pair had been divided at its exit from the stylo-mastoid foramen.

"The wound was dressed in the same way as the preceding. The ligatures separated on the fourteenth day; and it was completely healed by the thirtieth, leaving paralysis of that side of the face."

Before giving the conclusions which the author has added to his thesis from Berard, the second operation of Dr. Prieger, and a successful case by Mr. Kirby, of Dublin, may be cited, to give them

still greater weight. The subject of the former was a woman, aged 43, mother of eight children, and of a weak constitution. The tumor had gradually increased, from its first appearance, nine years before, till it had reached an enormous magnitude, protruding over the zygoma superiorly, the chin inferiorly, weighing the face down upon the breast on that side, and extending backwards over the mastoid process. Its breadth across the lower part was eight inches.

The tumor now began to be painful and red, and the patient daily more cachectic; and Dr. P. performed the operation the second day he visited her. There was some difficulty in dissecting the tumor from its adhesions, and turning it out. The carotid was laid bare, but not divided. The portio dura, and inferior maxillary nerves, were cut through, and eleven arterial branches secured. "Not a trace of the gland itself, or the glandula accessoria, was allowed to remain." The tumor weighed three pounds and a half, apothecaries' weight; but the description of its structure is very undefined "uneven, tumulated, and of a very fine consistence." The operation was performed on the 7th of September; on the 20th the ligatures were withdrawn; and on the 1st of October the patient left the hospital perfectly cured.

Mr. Kirby's case is detailed in the April number of Dr. Johnson's Journal for 1826; and from the particulars of the operation, no doubt can be entertained of the entire removal of the parotid. Mr. K. states that sir A. Cooper, in a letter to him, mentions that he twice removed the parotid in one year.

The conclusions drawn by M. Berard from the single operation of Beclard, are fully warranted by the above cases; viz., 1st, that the carotid in a scirrhus state can be entirely extirpated; 2d, that the carotid, and its larger branches, are of necessity implicated in the operation; 3dly, that it is impossible to spare the facial nerve; and, therefore, that paralysis is an inevitable consequence.

With regard to the propriety of securing the carotid before commencing the operation, it is worthy of remark, that Mr. Goodlad's case was the only one in which it was performed. In MM. Beclard's, Lisfranc's, Gensoul's, and Carmichael's, it was tied during the operation; and in Dr. Prieger's and Mr. Kirby's, no mention is made of the trunk of the external carotid requiring ligature; in the former it was left untouched. Although it would undoubtedly be a measure of security, there appears to be no very urgent motive why it should precede the removal of the parotid; and there must be many cases where, from the size of the tumor, it would not be practicable.

If we may consider as criteria of the authentic instances of this operation, the division of the external carotid, and its larger branches; of the portio dura and parotid duct; and the exposure of the styloid and mastoid processes, and the muscles arising from them, we have upon record eight cases placed beyond all doubt, five of which were perfectly successful: we may, I think, say six, including M. Lisfranc's.

The character attributed to them, that of true scirrhus, may not

have been correct in all of them, knowing the loose meaning applied to the term by the French; but other disease may render the operation necessary, and should the extreme urgency of the case demand it—as that alone can sanction it—after such favorable results as those above recorded, I imagine no surgeon will consider its danger and difficulty so considerable as to render extirpation of the parotid unjustifiable.—*London Medical Gazette.*

Amputation of the Jaw.—A girl, 14 years of age, but whose aspect gave the idea of her not being more than 10, presented the following appearances: On opening her mouth, and pulling down the lower lip, the incisor teeth were first observed—some carried backwards and others forwards, as regards their natural situation; they were loose, and seemed as if embedded in soft wax. The gums were raised up, and beneath them the parts were perceived to be of a very deep red. Behind, that is to say, on the side of the jaw next the mouth, the same appearances presented themselves. Laterally, the disease appeared to extend beyond the first molar tooth on the right, and as far as that point on the left. When two opposite points of the jaw were laid hold of and pressed in different directions, in the manner usually done to ascertain the existence of fracture, about the symphysis, a very slight degree of mobility was experienced: and this M. Dupuytren stated had frequently fallen under his notice. There was a certain kind of imperfect fluctuation perceptible, which, together with the other symptoms, led M. Dupuytren to the conclusion that the case was one of fungus hæmatodes. He thought it prudent, however, to make an *exploratory* puncture, to determine the point more decidedly: a little blood, but no pus, flowed from the opening. M. Dupuytren having now made up his mind, resolved to operate, particularly as the skin of the chin was sound, and the girl, though rather thin and ill grown, appeared free from visceral disease.

The patient was seated on a chair slightly raised; the head supported by an assistant placed behind, who compressed the labial arteries as they pass over the edge of the jaw. Another assistant laid hold of the right side of the lower lip, and the operator seized that of the opposite side: the lip was thus stretched, and divided vertically by an incision commenced at its middle, and carried as far down as the os hyoides, exactly in the median line. The lip now formed two flaps, the connexions of which with the jaw were destroyed. A portion of the cheek was at the same time detached from the bone, which was laid bare a little without the two canine teeth. Before detaching the soft parts within, it was thought expedient to divide the bone, because, if the opposite course was followed, some considerable vessels might be cut, which could not be easily dealt with at the moment, and much loss of blood might be the consequence. The left canine tooth, and the first molar of the right side, had been taken out before the operation was begun. On the left side the noise of the saw proved that it met with sufficient resistance; but on the right its action was noiseless, and its course made without any effort, proving that the bone on that side was not

healthy, and there was, in fact, a prolongation of the disease beyond the first molar tooth—which diseased portion of the jaw was also removed.

The bone being divided on either side, the soft parts within were separated. Some vessels which threw out blood in jets were cauterized with an iron at white heat. At the moment the portions of the jaw which had been asunder were observed to approximate, the two flaps of the lower lip were brought together, and retained by sutures, after which the patient was put to bed.

The diseased part consisted of an irregular vascular “element,” somewhat resembling the texture of the spleen; and a cellular part, which was dense, and mixed with a little fibrous tissue.—*French journal.*

THERAPEUTICS.

Rheumatism treated by the application of Acetate of Morphia to a Blistered Surface.—M. de St. M., of advanced age, of robust constitution, subject during twenty years to chronic rheumatism, and during the last four to an ill defined affection of the spine, experienced occasionally severe pain in the left leg. His movements were constrained, his gait uncertain, and he sometimes fell without any apparent congestion or other symptom about the head. A variety of means were tried against this slow but progressive paralysis; among these strychnia was employed with advantage, but the patient becoming aware of its powerful nature, became alarmed, and refused to continue it. On the 2d of July he was seized with horrible pain in the left lower limb, which was convulsed. M. Blanc applied ammonia to the upper and outer part of the limb, so as to raise a blister, the size of a forty franc piece, which was effected in ten minutes. The cuticle was removed, the surface of the skin dried by pressing it with a piece of fine muslin, and then sprinkled with half a grain of acetate of morphia. The pains continued, and in a quarter of an hour a second blister, similarly treated, was made at the inner part of the knee. By this a little relief was obtained, and the operation was practised yet a third time. The pain now instantly ceased, and never returned. The patient experienced some drowsiness and slight vertigo.

M. P., aged 30, of sanguine temperament, had some years ago an attack of acute rheumatism, which lasted four months, since which time he has enjoyed good health. On the 10th of July, being in the country, he was exposed to cold and wet for several hours. On returning home he experienced shiverings, headache, and severe pain in the left thigh. Next morning, as his sufferings continued to be very great, he sent for Dr. Blanc, who found him in a high fever, with his pulse at 115, great heat of skin, complete inability to move, and unsupportable pain in the affected limb. Two vesications were made on the thigh, each of which was powdered with half a grain of acetate of morphia, and some hours after the

pains entirely disappeared. The disease lasted eight days more, but without suffering, and the morphia seems, therefore, to have had little effect on its duration.—*La Clinique*.

Acetate of Morphia successfully applied to a Blistered Surface in Tetanus.—A woman, 29 years of age, having general good health; received a slight wound on the brow, which she washed with cold water, and dressed with emollient poultices. Two days after, incipient trismus became manifest, accompanied by contraction of the muscles of the neck and abdomen. Tetanus soon became general, and the spasms were very severe. She was then (viz. from the 22d of October to the 27th) treated five days by means of bleeding; warm baths, continued for an hour and a half, or two hours; sedative plasters on the neck and temple; and, finally, she had a third of a grain of acetate of morphia every two hours. On the 1st of November, the disease still continuing, a quarter of a grain of the acetate of morphia was sprinkled over the skin, a blister having been previously applied, so as to produce a raw surface. The dose was repeated in a few hours. The effect was very remarkable; in a few hours the contractions became less violent, and the trismus abated. All other treatment was now abandoned, and the third of a grain of acetate of morphia applied twice a day. The patient rapidly recovered.—*Annali Univer. di Medicina*.

On the use of Chlorine in Scarletina. By TAYNTON and WILLIAMS.—At the time scarlatina was raging severely in this neighborhood, a medical friend requested us to give a fair trial to the chlorine. At the moment, we were attending a boarder at the school, (mentioned in a former letter,) a son of Mr. Hammond, the druggist, at Dartford. He was most dangerously ill. The skin was covered with an eruption of a dusky hue; the nostrils excoriated by the acrimony of the discharge; the greatest difficulty in swallowing any thing; low delirium, with a very rapid pulse: in short, every symptom of approaching dissolution.

In this state he began to take the chlorine in the evening, one drachm in half a pint of distilled water. The nurse was directed to give him as much as she could prevail on him to swallow. On visiting him the follow morning, there was an evident amendment, and in twenty-four hours he appeared out of danger. Encouraged by this favorable case, and having many more opportunities of employing the chlorine, we gave it to patients of all ages; and we can most solemnly declare, that it proved successful in almost every case in which we were called in time, and in which the medicine was faithfully administered.

It possesses one very great advantage over most other medicines, which is, that children will generally take it without difficulty.—*London Medical Gazette*.

On the Inefficacy of Ammonia and the Efficacy of the Cold Affusion in the Treatment of Poisoning with Hydrocyanic Acid.—Some

years ago, Mr. Murray, of London, proposed ammonia as an antidote for poisoning with prussic acid, and the trials he made with it on the lower animals were so satisfactory, that he advertised his willingness to take a dose sufficient to cause death in ordinary circumstances, provided a competent person should be at hand to administer his antidote. The investigation, of which we are now to give an account, will probably satisfy him that he might have found reason to repent his rashness, had any one been so curious as to accept his offer.

Dr. Herbst, after repeated experiments, has come to the conclusion, that ammonia, even in a concentrated state, when administered to an animal which has taken a dose of prussic acid large enough to prove fatal, and when not administered till the symptoms have existed for some space of time, will hardly ever save its life. But he admits, that in cases in which the dose has not been adequate to occasion death, yet causes severe symptoms, this remedy is of substantial benefit, by mitigating and shortening its effects. He further objects to its general use as antidote, that in a tolerably concentrated state, it instantly excoriates the parts to which it is applied, and that in a state so dilute as to be free from this inconvenience its efficacy ceases. The following experiments are given in support of the foregoing statements. 1. A middle sized mastiff received 14 drops of Schrader's prussic acid, and when the symptoms were developed, yet had not passed the convulsive stage, twenty drops of *aqua ammoniæ* were dropped into its throat. It immediately sprung up and ran about, but soon fell again; and the muscles were less violently contracted. A drachm and a half of the ammonia was subsequently given at intervals, and always with the effect of making it jump up and run about for a little; but no permanent amelioration was produced. Fourteen drops more of the prussic acid were then administered, the effects of which were not in any degree lessened by the administration of another half drachm of ammonia. In a few seconds the animal expired. The tongue and throat were found excoriated and lined with blood. 2. Eight drops of the same acid were dropped into the throat of a Pomeranian dog four months old. Immediately he ran about confused, and then fell down. While the respiration continued, a portion of a mixture of half a drachm of ammonia, with half a cup of cold water, was poured into its mouth. At first it was not swallowed; but the animal soon became somewhat brisker, tried to rise, and then swallowed it; but its state of prostration rapidly returned, the muscles became flaccid, fresh doses of the mixture neither were swallowed nor produced any amendment, and death ensued five minutes after the administration of the acid. The irritability of the muscles continued long after death, and the heart continued to pulsate for ten minutes.

In Dr. Herbst's hands, the cold affusion proved a much more effectual and certain remedy. "When the dose of the poison was insufficient to prove fatal, two affusions were commonly sufficient to dispel every unpleasant symptom. When the dose was larger, it was requisite to repeat it more frequently, and to persevere for a longer time. The certainty of success depended greatly on the

early employment of the remedy. It was most to be trusted when resorted to immediately after the administration of the poison, or at all events during the convulsive stage, while the muscles were in a state of contraction, the eyes staring, insensible, and immoveable, the head drawn backwards, and the extremities extended. This stage is rapidly succeeded by general relaxation of the body, gradually increasing slowness and feebleness of the respiration, a slow, weak, or almost imperceptible pulse; and death is then close at hand. Even in this paralytic condition, the cold affusion will sometimes recal the expiring spark of life; then the convulsions of the muscles were renewed, the extremities became again hard and immoveable, and, by the gradual abatement of the spasms, the effects of the poison were slowly dispelled." The following experiments are related in support of what is here mentioned. 3. A full grown spaniel of a small breed got six grains of Schrader's acid. Immediately he uttered a piteous howl, fell down, stretched out his legs, and in a few seconds appeared dead. Cold water was then poured over its head and back, and subsequently over the whole body; when the breathing began to return, the animal in a few minutes shook itself, and then tried to rise. In a quarter of an hour he was able to stagger forward a little. In an hour he had recovered entirely. 4. A strong pointer bitch, five years old, took eight drops of Ittner's prussic acid. In a few minutes she staggered, drew her head backwards, and was on the point of falling, when cold water was dashed over her head. Instantly she recovered, and in a few seconds she was as lively as before the experiment. Several fresh small doses of the acid were subsequently given, and always with the effect of developing its narcotic action; but they were as uniformly removed by a fresh affusion. In fifteen minutes, violent vomiting of tough white mucus supervened, and she slavered much. These symptoms, however, also ceased in an hour and a half, when she took her customary meal. 5. Next morning eight grains were again administered to the same animal. Immediately she tumbled down, and was attacked with opisthotonos of the most violent kind, the breathing became more and more obstructed and feeble, and speedy death was evidently threatened. No time was now lost in applying the cold affusion. In a single minute the breathing became regular, she raised her head, looked bewildered around her, but continued lying. After a second affusion she stood up, walked, but with difficulty, and in an hour was so well that no sign of the action of the poison could be observed. 6. The most decisive trial was the following. Two young poodles were chosen, of the same age and size, and accustomed to the same sort of food. To one was given four drops of Ittner's acid, which had the effect only of causing temporary staggering. Eight drops were then given, and caused loud cries, mucous vomiting, and opisthotonos. From this dose too he was beginning to recover, when four drops more were given; and death then ensued four minutes after the first administration of the acid. The total quantity of acid amounted to seven grains. This quantity was next given to the other dog at one dose. He immediately turned round, staggered, and fell down, incapable

of stirring, and insensible. The head was drawn strongly backwards, the legs were extended, and in scarcely half a minute afterwards, the breathing was imperceptible, and the pulse hardly to be felt. The cold affusion of the head was then resorted to without delay, as the muscles were flaccid, and the animal appeared dead. At first it had no effect. The earliest sign of returning animation was renewal of the opisthotonos, and extension of the flaccid extremities; at the same time he uttered a feeble cry, which soon afterwards became stronger. The stiffness of the body continued a long time. The affusion was then repeated over the whole body. The crying continued, and touching the body seemed to cause pain. The affusion being repeated every fifteen minutes, the respiration at length became somewhat stronger; but it always returned to its feeble state in the intervals. At eight in the evening, (the author does not state the interval after the beginning of the experiment,) the animal was completely restored to health, ran about, barked, and took his food as if he had never been ill. 7. Nine drops of Schrader's acid were injected into the external jugular vein of a little house dog, six months old, in five minutes, twelve drops more, and other five minutes, fifteen drops, without any distinct effect, except quickness, weakness, and irregularity of the action of the heart. Twelve grains (27 drops) were then injected at once, upon which there ensued involuntary discharge of fœces, most violent tetanus, and all the customary symptoms, followed by flaccidity of the body and almost imperceptible breathing. The first cold affusions made the animal sprung high up, and when continued, they removed in no long time the paralysis of the hind legs, which was the last symptom that remained. In three quarters of an hour he had recovered completely. 8. Three days afterwards fifty drops were injected into the opposite jugular vein of the same animal. The tetanus was even more violent than before. The cold affusion was not resorted to, until the whole body was in a state of paralytic flaccidity, the muscles of the eyes alone preserving their spasmodic contraction. The effect of the remedy was equally remarkable as in any former experiment; after the first application, the breathing immediately became stronger; and in four hours the dog was as lively as ever. The same beneficial results were invariably obtained in other experiments, in which the poison was applied to the eye, to the inner membrane of the nose, or to external wounds. When the dose was so large that its effects were beyond the reach of the cold affusion, it was observed to prove fatal instantaneously, that is, almost before there was time to remove the remedy.—*Archiv für Anatomie and Physiologie*, No. 2, 1828.

New Method of Treating Tænia. By DR. SCHMIDT, of Berlin; and described by Casper, by order of the Prussian Government.—In October, 1823, Dr. Schmidt informed the Prussian minister of public instruction and medical affairs, that he had discovered, twenty years ago, an infallible remedy for tænia, which he now wished to sell to government. The minister instructed Dr. Natorp to make trial of the remedy. This gentleman gave a very favorable report

of it. He said it was suited even to feeble constitutions, that it evacuated the tænia in twenty-four hours at farthest, did not require any preparative treatment, and, besides, did not irritate the patient more than an ordinary purgative. Drs. Kluge and Neuman of the Charity Hospital were charged to repeat these experiments; and in their report of October, 1826, they expressed themselves as follows: "Schmidt's method has never failed in causing the expulsion of the tænia, in any case where its existence was clearly proved. Its effects are prompt, void of danger, and evacuate the worm entire and living." In consequence of these representations the king of Prussia has granted Schmidt a pension of 750 francs for the publication of his remedy.

The following is his method of treatment: The first day the patient is to take two table spoonfuls of the portion No. I. every two hours, commencing in the morning fasting, and continuing till 7 o'clock in the evening.

No. 1.

R Pulv. rad. valerian, ʒvj.
Fol. senna, ʒij.

Make into an infusion of six ounces—

And then add—Sulp. sod., ʒiiij.

Syrup mannæ, ʒij.

Syr. ol. tanacet. vul., ʒij. M.

The patient to take for breakfast coffee without milk, and very sweet; at noon, a panada or gruel, with some herring; at eight in the evening, a hash made of herring, ham, and onion, with much oil and sugar.

Most generally the patient voids more or less of the tænia during the first day. In two cases Dr. Schmidt has seen the worm evacuated entire by this preliminary treatment.

On the second day, the patient is to take, in a tea spoonful of syrup, six of the following pills every hour, beginning at six in the morning.

No. 2.

R Pulv. gambog.
— rhei.
— jalap, aa. ʒij.

Assafœt.

Ex. taraxici, aa. ʒiiij.

Pulv. fol. digital.

— ipecac.

Sulphur antimon. præcip. aa. gr. xij.

Calomel, ʒij.

Ol. tanacet. ether,

Ol. anis. aa. gr. xv. M.

Make into pills—aa. gr. ij. and keep in a close stopped phial.

Half an hour after the first dose, a table spoonful of castor oil is to be given, and much sweetened coffee drunk during the day. Generally the worm is evacuated by 2 o'clock, when the pills are to be discontinued; but should this not be the case, they are to be con-

tinued, giving, from time to time, a tea spoonful of castor oil with sugar. At noon a broth may be taken, and in the evening a panada. In order to be assured that there are no remains of the tænia remaining unevacuated, the patient should take a few of the pills the next day. In order to insure against the return of the complaint, the patient should take, for some time, every eight days, one or more doses of the pills; be restricted to a light animal diet, with wine, and also take some bitter.

In such cases as we are not well assured of the presence of tænia, he administers the following powder in the morning, in a little syrup, having taken, the night previously, largely of sugared water, and eaten herring as before directed :

℞ Pulv. jalap, gr. xv.
 — lem. santonici, gr. x.
 Gambog.
 Calomel, aa. gr. vj.
 Ol. tanacet, ʒj. M.

During the day the patient is to take abundantly of some animal broth, and sweetened coffee. The powerful alvine evacuation it induces usually brings away fragments of the worm, sometimes the worm entire; and on the succeeding day the pills are to be had recourse to if required.

Dr. Schmidt advises not to employ the remedy during pregnancy, about the time of the menstrual periods, in persons affected with phthisis, in inflammatory diseases, marasmus, or in the feebleness of old age.

Of 66 cases cured, 15 were men, 20 had one worm only, all the others had several, and one of them 17.—*Archives Gen. de Med.*

MIDWIFERY.

Extra Uterine Fætation.—Ellen Bryan, a married woman, aged thirty years, became pregnant in the year 1821. At the period of her expected parturition, she felt something break off from its place inwardly, and she was visited by her medical attendant. But the time passed away without any delivery, and without any diminution of her abdominal bulk. A new state of gestation supervened in a year and a half afterwards, and terminated, at the end of nine months, in the birth of a full grown female infant. At the expiration of about two years more, Bryan gave premature birth to a live babe, which seemed to have attained only the close of the sixth month. She again, for the fourth time, became pregnant in 1826, and was, after seven months' gestation, delivered, in Cork street Hospital, of a child, which, like the preceding one, survived its birth only a few hours. The original tumor remained unabated.

I first saw this poor woman upon her admission into one of my wards, on the 19th of May, 1827. The following state of disease presented itself to my observation: Countenance pale, dejected,

and expressive of long suffering; eyes sunken; much general emaciation, pulse slightly accelerated, and extremely weak; abdomen of immense bulk and prominence, palpably enclosing a large solid substance like a fœtus; the centre of this prominence pointing forwards, and exhibiting an incrustated ulcer on its apex, a little below and to the right side of the umbilicus. Diarrhœa.

21st May.—The incrustation at the apex of the above mentioned prominence has detached itself and fallen off, and has left an aperture into the abdominal cavity, from which there is a discharge of much fetid matter, partly ichorous and partly purulent.

27th.—Diarrhœa unabated; abdominal pain not acute, except when it is rendered so by pressure, or by an unfavorable position of the patient; a most offensive odor emitted from the open abdominal ulcer; a gradually increasing dilatation of this aperture; a feeling on the part of the patient of being hurt interiorly by a bone. She takes a night pill containing one grain of opium; and, with a view of obviating as much as possible her hourly increasing debility, I direct for her four grains of sulphate of quinine twice a day, and twelve ounces of port wine, which she likes much.

9th June.—The abdominal aperture was hourly becoming larger. It was so wide yesterday as to expose to view the entire cause of this poor woman's tedious malady: viz. the inanimate body of a full grown male infant, which lay out of the womb in the abdominal cavity during more than the preceding six years. It has been taken out by our very intelligent surgeon, Mr. Traut, and preserved in spirits of wine. It is covered with a semi-coriaceous cutis, that is particularly distinguished over almost the whole of the surface of the shoulders, back, and seat, by an adipocire like appearance. Our poor patient is barely alive. Her pulse is scarcely perceptible. Portions of intestine have been destroyed by abrasion and sphacelation, and the feces pass out anteriorly through the opening.

13th.—She has ceased to exist.

14th.—Of the appearances exposed to view by the anatomical examination of the body, the following are the principal: An ample cyst, containing much pus, is situated behind and a little above the right side of the fundus uteri. The thick envelop of this sac consists in a prolongation of the peritoneum, especially of the right ligamentum latum. The right fallopian tube is distinctly traceable from both ends towards its centre, where it is connected with the external side of the parietes of the cyst, and is there lost in consequence of its being confounded with this envelop. The right ovary is somewhat flattened on its posterior side, where it is close to the adjoining side of the cyst. The left ovary, and corresponding fallopian tube, are sound, and in their natural situations. The uterus is sound, and does not bear the slightest vestige of any former laceration or of any kind of disease.—*Appendix to Dr. O'Reardon's Report of the Dublin Fever Hospital.*

MEDICAL JURISPRUDENCE.

Report of the Trial of Jonathan Martin, for setting fire to the York Minster.—The destruction of the venerable cathedral of York by fire, is fresh in the memory of all our readers, and the protracted trial of the incendiary, excited considerable interest in the public mind. The initiatory examinations of the supposed culprit—and, we admit, the actual perpetrator, left not a doubt in the mind of every medical man of any experience or knowledge in his profession, that Martin was as decided a monomaniac as ever entered the walls of Bedlam. The life of Martin, written by himself, is really a curiosity, and contains in every page—we might say in every line, intrinsic proof of disordered intellect. We are glad to observe by reference to the report of the trial, that the professional witnesses, Mr. Caleb Williams, and Dr. Baldwin Wake, of York, proffered a chain of evidence, under a close, and sometimes a galling, cross examination, which does them infinite credit. We cannot better express our entire approbation of the sentiments and conclusions contained in the evidence of Mr. Williams and Dr. Baldwin Wake, than by giving them a permanent record in our journal. It is a small, but an honorable prize, conscientiously adjudicated to merit. Would that we had more frequent occasions for expressing our approbation of medical evidence in courts of justice.

Caleb Williams, on his affirmation—examined by Mr. Sergeant Jones. Q. You are a surgeon in the city of York, I believe? A. Yes. Q. Are you one of the medical attendants at the lunatic asylum, called the Friends' Retreat? A. Yes. Q. Have you been conversant on the subject of the diseases of lunatics? A. Yes, for five or six years. Q. When did you first of all see the prisoner at the bar, Martin, so as to observe his state of mind? A. On the 21st of the present month. Q. How often have you seen him since that time? A. Daily, with the exception of two days. Q. In the first place I would ask you, what appears to be the state of his mind? A. I consider him to be what is denominated a "monomaniac." *Baron Hullock.* Just state, for the information of the jury, what that is. A. It is a species of insanity, in which the delusion is confined to one idea only, or to one train of ideas. Q. Is that the expression that is well known and commonly used in medical treatises and discussions? A. Yes. Q. It is opposed to delirium or delusion, upon all subjects generally? A. Yes. Q. Then first of all I ask you, whether you have taken pains to satisfy yourself, whether the symptoms or appearances of his insanity are feigned or bona fide? A. I believe they are bona fide really. Q. Have you had any discourse with him on the subject of dreams? A. I have. Q. What is your impression with regard to the influence of dreams upon the mind of the prisoner? A. I believe his dreams to have more influence over him than they would have over a person of sound mind. Q. To what subject do the dreams of the prisoner apply? A. Chiefly to the subject of religion. Q. Did you also attend to his bodily strength? A. I did.

Q. Are there certain symptoms connected with his bodily strength, that afford any influence with regard to the state of his mind? A. There are. Q. Did the appearances which you witnessed with regard to the state of his body, concur, or run differently, with his state of mind? what is your opinion with regard to the state of his mind, as derived from those appearances? A. They confirmed my opinion with regard to the state of his mind. Q. How was the eye? A. The eye was red. Q. I need hardly ask you, whether persons acquainted with medical subjects of this sort, look to the eye of the patient as a test of their state of mind? A. The eye is frequently observed, certainly, and the countenance generally. Q. How was he as to his pulse? A. It was full, hard, strong, and quicker than natural. Q. Is that state of the pulse the one commonly found in instances of monomania? A. Yes, during the period of excitement it is common. Q. Do you think him a person that it would be safe to trust to go abroad? A. I think the instances that have been given, prove that it is not safe for him to go abroad. Q. Then you are of opinion that he is insane? A. Yes. Q. And that his madness is upon one particular subject, or upon one train of ideas? A. Yes. Q. Are there many patients or persons in confinement who are laboring under monomania, and who have no other complaint? A. Yes, there are many; I have opportunities of seeing many every week. *Baron Hullock.* Were it otherwise, he would not be denominated a monomaniac.

Crossexamined by Mr. Alderson. Q. Are not these monomaniacs capable of distinguishing right from wrong? A. Not upon subjects upon which they are deluded. Q. But upon general subjects? A. Upon subjects perfectly unconnected with their delusion they have the power of judging of right from wrong. Q. Upon those subjects upon which they are capable of so judging, they act like other persons capable of judging right from wrong? A. Yes, frequently. Q. Do they avoid dangers consequent upon their actions? A. Frequently. Q. Do they run away after having done a thing that they know is wrong? A. Very commonly. Q. Do they adopt skilful means to avoid the consequence of such an act? A. They are very cunning in escaping punishment. Q. And also very cunning in pursuing the means to accomplish an act? A. Yes, the same. Q. You don't consider that that shows that they know, beforehand, that they are doing a wrong act? A. No. Q. In what way would they show they were doing a wrong act: would they do it by staying, if they did know they had done a wrong act? In what way do you, as a medical man, expect that insane persons would show it? A. I should think that an insane man would endeavor to avoid being detected. Q. Then it is possible for a person, being an insane man, to do an act which he knows will be followed by punishment, and consequently endeavor to avoid it? A. It is. Q. Does not the fear of punishment deter them? A. I believe the mind is so absorbed with the delusive idea, that no other idea occupies their attention. Q. Do you not know that persons who are insane are prevented from doing such acts through fear of punishment? A. No, that will not operate so as to prevent the de-

lusion coming on. Q. What, in your judgment, is the peculiar subject upon which this person, the prisoner, is to be looked on as being mad? A. An undue reliance upon his dreams, believing they are revelations of divine will, directing him to perform certain acts. Q. Has he told you that that is so? A. Yes. Q. Have you any other reason for knowing it, than that he has told you so? A. No. Q. Had you any other conversations with him before? A. No. Q. When did you first see him? A. On the 21st of this month. Q. That was the first day of the assizes? A. Yes. Q. All your interviews have been with him since the judges came to town? A. Yes. Q. Since that, he has been telling you of his dreams. A. Yes.

Reexamined by Mr. Brougham. Q. You say you have had considerable experience in regard to the diseases of insane persons, from your attending a lunatic asylum? A. Yes. Q. Do you consider, judging from your experience, that the conduct and appearance of this prisoner could have been put on with the view of deceiving you, or that it was otherwise than real? A. I don't think it could.

Dr. Baldwin Wake sworn—examined by Mr. Brougham. Q. You are a physician in York. A. Yes. Q. Have you had experience of lunatic patients? A. Yes. Q. Are you physician to a lunatic establishment? A. Yes, I am; to the York Lunatic Asylum. Q. How long have you been so? A. For thirteen years and upwards. Q. Have you seen the prisoner lately? A. Since the 21st of this month, and also about three or four weeks ago, without his being aware I did see him. I looked through the window of Mr. Kilby's apartment. Q. Have you paid attention to his case lately? A. Yes, I devoted an hour or two at a time, and investigated his case as carefully as time would allow me. Q. During the visits you have made, and you have seen him almost daily, you have investigated his case? A. Almost daily; and I have seen him occasionally twice a day. Q. Now, judging from what you have seen of him, and applying the result of your own experience in such diseases to him, is it your opinion that he is of sound or unsound mind? A. Of unsound mind, most undoubtedly. Q. Of what description is the insanity he labors under? A. *Monomania*. Q. Is that a frequent species of the complaint? A. Very frequent; there are a great many varieties. Q. But the characteristic of the whole of them is, that of being under a delusion on one particular point, and more or less sane upon other points? A. Yes, sir; that they have sanity upon most other points. Q. Did you observe any particular bodily infirmity about him? A. Yes. Q. Had you occasion to observe his head? A. I had. Q. What did you observe in regard to it? A. I observed that it has the appearance, on the frontal bone, as if he had had a wound or accident, and upon enquiring as to it, he told me a long detail of his burning the Minister, nearly as has been stated before; and in doing so, I observed that he suddenly put his hand to his head, and seemed quite lost for some time; that attracted my attention more particularly towards his head, and when he was apparently sufficiently recovered to answer questions, I asked him what was the matter, and he said, "when I talk much, a pain strikes me at that place where I had received a

wound." Q. Did you, in consequence of that observation, examine his head more particularly? A. Yes, I did. Q. What was the result of your examination? A. I found there was the mark of an injury there, and I enquired into the particulars of it. Q. I shall not trouble you to give a minute description of it, but you say there was apparently the remains of an injury? A. Yes. Q. Did you feel the mark of that injury with your hand? A. I did. Q. What effect did the pressure of your hand make upon it? A. Not much effect; but I found that there seemed to be some little depression upon that part, and I enquired something further about it. Q. I shall not ask you what he told you; did you make any enquiry as to his appetite? A. I did, and I found that he had a most voracious appetite. I went down in the cell when his wife came to him with his dinner, and I observed that he eat in the most voracious manner a beef steak pie, and he devoured it in a short time, although it appeared as much as any three men could have eaten. Q. Is that a symptom frequently attending the species of insanity you describe? A. It is an attendant symptom upon insanity generally, where the health is at the same time good. There is generally a voracious appetite, and he devours his food in a particular manner. Q. Did you observe his eye? A. I did. Q. What appearance had that? A. It was glassy, and when he was excited, it betrayed a great deal of *maniacal* expression, or appearance in it, which would strike any person accustomed to those diseased patients, so that they cannot mistake the nature of their complaint. Q. Could those bodily symptoms that you describe, have been put on for the purpose of deceiving you? A. I presume not. Q. Don't you believe they could not? A. I do firmly believe they could not; it is a mistake when I use the other expression, that I presumed it could not be assumed. Q. Had the pulse any thing to do with discovering the state of the patient? A. The pulse was uncommonly hard, and not very frequent. I examined the state of the heart, but I found the action of the heart did not account for the strong pulse, I therefore attributed it to his delusion, and to the state of his mind. That symptom is frequently attendant upon insanity, when there is a restlessness and excitement. Q. Is an inability to remain at rest one of the symptoms? A. I observed him when he did not know it, and perceived him walk up and down apparently five or six miles an hour; and that was his usual manner. Q. Was that observed frequently? A. Yes. Q. From the opportunities you had of seeing him upon those occasions you speak of, have you any doubt that he is a person of unsound mind? A. I have no doubt of it. Q. Is he a person capable of distinguishing right from wrong? A. Upon the subject of his delusion, I think not. I could state my reason for drawing that conclusion, if necessary, from another case that bears upon this one. Q. No, I don't ask you that, but I may ask you, if a person, who has a delusion upon one particular subject, and is, upon that subject, incapable of distinguishing right from wrong, be capable, upon other subjects, of distinguishing right from wrong. A. Generally, they can do so upon other subjects. Q. Could you, upon other subjects, rely, even with certainty, on

their distinguishing right from wrong? A. Yes. Q. Upon subjects generally, excluding those to which this delusion applies, I ask you, are insane persons under the influence of fear? A. I think upon maniacs in general, fear operates very powerfully. Q. And will they endeavor to effect their escape after they have done a wrong act? A. Yes, they will endeavor to elude punishment. Q. May a person laboring under this species of disease, called "monomania," be incapable of distinguishing right from wrong, and then doing that which we should call wrong, be able afterwards to know that they are likely to be punished for it? A. I think that when that delusion is frequently excited, a maniac does not know right from wrong; but then, after he has committed a crime, he may become sensible of his danger. I have known many instances of monomania, and I know that at certain times they have lucid intervals, and will be conscious of the error they have committed, and the delusion under which they labor; of this I know a striking case, if it were necessary upon this occasion to state it.

Baron Hullock summed up in a long, elaborate, and able manner. The fact of Martin's having set fire to the Minster was clear as the sun at noonday. But the question of culpability—that is to say, of sanity or insanity, rested entirely, or almost entirely, on the medical witnesses. The jury instantly acquitted him, on the plea of insanity—and every man of the slightest medical information, must acquiesce in the decision. We tender our thanks and the profession of sincere esteem to Dr. Baldwin Wake and Mr. Williams.—*Medico-Chirurgical Review.*

DOMESTIC.

[We publish the annexed letter from our highly respected friend Dr. ROE with great pleasure, as announcing an important and valuable discovery, which cannot fail to interest practitioners in general, and, more especially, our numerous brethren in the country. As far as our opportunities of observation have extended, we are enabled to confirm the statement of Dr. Roe.]

New York Oct. 19th, 1829.

DEAR SIR,—

The increasing demand for leeches in this country, and the expense of imported ones preventing the poor from having the benefit of this useful remedy, induced me, some time since, to make some observations and experiments on the American leeches, with a view of ascertaining the reasons why they could not be made to answer the purposes of imported leeches.

From the observations which I made, and from being informed by Dr. Henry Burnham, of this city, that he had found them to contain worms, I came to this conclusion, that the leeches of this country, when taken from the water, but more particularly from stagnant

pools, are so much engorged with nourishment, as to make them regardless of receiving any farther sustenance. I accordingly subjected them to the operation of stripping, and then kept them in rain water, by which they were rendered, for a short time, more voracious, but not equal to European leeches. From farther observation, I was inclined to think that they fed on animalculæ contained in the water. After stripping the leeches, and keeping them a few days in filtrated water, which was changed frequently, I found that they could bite as well, if not better, than those that are imported generally do. For want of a dripping stone, I made use, in this experiment, of a plate of plaster of paris, half an inch thick, cemented with the same to the sides of a common flower pot, about an inch from the bottom. I presume, however, that water filtered through paper would answer every purpose.

There are now, in this city, two individuals who have made a business of applying these leeches for several months, one of whom informed me lately, that, by keeping them a week or ten days in filtrated water, they will become so hungry as to bite each other.

I have made no experiment to ascertain the length of time they will live in this state of starvation. From numerous trials, I do not believe that the bites of the American leeches are more likely to produce troublesome ulcers, than those of any other leeches.

Respectfully Yours,

STEPHEN C. ROE.

DR. PEIXOTTO.

Case of Poisoning by Opium, successfully treated by the use of the Stomach Pump, &c. Communicated by ANDREW HAMERSLEY, M. D., &c.

I was summoned, on the first of October, to visit Senor C., a native of Mexico, who, it was feared, had made an attempt to commit suicide by swallowing some poisonous substance. He had, for some time previously, exhibited unequivocal signs of mental depression; and even declared his intention to destroy himself, if his source of unhappiness was not removed. On my first visit, I found him with a full pulse, considerable cerebral excitement, and that leaden hue of features, so commonly observed during the operation of a narcotic medicine. There was some inclination to vomit, which the patient resisted, yet boldly denying that he had any designs upon his own life. Being unable to speak a word of English, and I being but imperfectly acquainted with the Spanish, we could hold but little conversation, except through his fellow countrymen, some of whom were sent for, to act as interpreters. I attempted in the first place to bleed him; this he determinately resisted, and I then resolved to employ the stomach pump. Some necessary delay occurred before the instrument could be procured, and when attained, the urgent solicitations of his friends could not, for some time, induce him to submit to its application. I then determined to apply it by force, and while making the necessary arrangements, the patient submitted. It was introduced into the

stomach by the insertor himself; and, as the organ was found to be empty, I ordered that water should be taken in by the pump, for the purpose of cleansing it. This fluid was immediately ejected by the voluntary efforts of the stomach, and smelled strongly of opium, containing, also, some very minute particles of what I conceived to be the solid drug. I then requested the patient to swallow large draughts of warm water, and enjoined locomotion for some minutes. This was soon followed by vertigo, and a return of full vomiting; and it was at this time that the fluid ejected possessed, in the greatest degree, the peculiar odor of opium, and contained the largest amount of the gum in a state of partial solution. It is proper to mention that very shortly before I arrived, the patient vomited to a considerable extent, what, however, seemed to be nothing but his dinner in a comminuted state, which he had just swallowed. He also, between this period and that of the employment of the instrument, vomited, once or twice, small masses of fluid, which had the odor of the opium, and was, to all appearance, mixed up with some of the gum. It was also about this time that Dr. Perez, a Spanish gentleman, arrived; who, from speaking the same language with the patient, had been solicited, by the friends of the latter, to visit him. He approved of the course which had been pursued; and, in consultation, it was determined, there being at this time a strong tendency to coma, with contracted pupil, to apply a blister to the nape of the neck, a sinapism to the epigastrium, and blisters to the thighs. Our evident intention then was to obviate such symptoms of cerebral congestion as appeared, as we had used every means which we could devise to empty the stomach of all the opium which it contained. A few hours after, we found the patient much relieved; his breathing had become calm, and the state of partial coma was exchanged for that of refreshing sleep. The blisters began to have their due effect; but the sinapisms, owing to the refractory opposition of the patient, were not applied. The succeeding night he slept with tolerable composure; but at about 7 o'clock of the morning, I was again called to him, as it was presumed, from a return of the vomiting, and from having discovered about his person a box containing pills of opium, that he had made a second attempt at suicide. Judging from the matter which was ejected, and from the irritable condition of his stomach, that if such attempt had been made, which the patient strenuously denied, some of the drug remained in the stomach, I merely, with a view of ensuring certainty, gave him a solution of sulph. ziu., which, however, did not seem to affect him. An hour or two after, I found him quite calm—the blisters had acted well; and having enjoined proper precautions to prevent another similar attempt, and the administration of a mild but efficient purgative, light diet, &c., I left him till the ensuing morning.

On this day he confessed to a priest (a Spaniard) who had seen him occasionally from his first attack, that he had swallowed opium with the intention to destroy himself. He had now regained comparative tranquillity of mind. His bodily functions were regular; and, in a few days afterwards, he sailed for his native country.

The foregoing case derives its principal interest from the evidence it furnishes of the utility of the stomach pump; and this circumstance has, in part, induced me to put it upon record. It is also pertinent to remark, that as opium is one of those narcotics which affect the system, as Dr. Paris is inclined to think, by absorption, the propriety of bleeding, by its well known tendencies to hasten that process, might be called in question. Where, on the other hand, strong symptoms of cerebral congestion are present, which certainly can be best alleviated by local or general depletion; and where, too, an enetic cannot with safety be employed, till such congestion be relieved, we should hardly be authorized in abstaining, at least, from topical bleeding, which, as it has less effect upon the system at large, may be employed with less fear of promoting the absorption of the poison. The use of strongly acidulated drinks, and of undiluted vinegar, if the views above referred to are correct, is, of course, to be reprobated. Where, however, we apprehend that solid opium has been swallowed, the frequent use of warm water will be found, I think, of service, in separating more readily the gum from the stomach, to which, from its nature, it becomes, in a manner, agglutinated. Thus, in the present instance, the opium was ejected in the largest quantities even after the use of the stomach pump, while large draughts of warm water, with a constant motion about the room, were enjoined.

There were some circumstances connected with the above case, both of a moral and physical character, which it would be highly interesting and useful to discuss. These relate both to the views which have been, at different times, entertained of the *modus operandi* of opium, and of the correspondent treatment to be pursued; and to the severe legal enactments, and to the metaphysical speculations which have been framed on the subject of what might be termed the *suicidal disposition*, and the fatal consequences which frequently result. On some more suitable occasion, I shall resume this subject, under the points of view just referred to, with such aid as is to be derived from the writings of Esquirol, Falret, and others.

Account of a Case of Precocity, occurring in Morristown, New Jersey. Related by Dr. JOHN B. JOHNS, in a letter addressed to Dr. D. GREEN, of New York.

The following statement of facts, is the substance of a conversation I had with Mr. Force and his parents.

They informed me that during the first year of his life they did not observe any thing extraordinary in his appearance or manner; he was small at his birth, weighing but six pounds; and when a year old, was small, in comparison with many other children at that age; but was healthy. As he entered his second year, he began suddenly to increase in size, and at the end of the second year, he very far surpassed any other child of that age within their knowledge.

He continued increasing most rapidly, both in height and weight, until he was seven years old, when he had attained the height of four feet ten inches, and weighed one hundred and nine pounds.

At nine years old he ceased to grow, and weighed one hundred and sixteen pounds, but he did not increase in height after he was seven years old.

His strength and activity were in proportion to his growth. He could shoe a horse at five years old, and could carry a bushel and a half of wheat up a pair of stairs.

His voice began to change between two and three years old, and at four, it was as completely changed as it is common for it to be with others at twenty. As his voice changed, his beard made its appearance, and although he was not shaved until it grew to such a length as to appear indecent, yet he began to shave at eight, and has had a very heavy beard ever since.

He informed me, that at twelve years old, he was in the habit of cradling rye and wheat, and mowing grass, and of doing the same day's work with men of thirty years old—cut as much and as fast, and with as little fatigue. Being a very short man, he had a cradle made particularly for himself, the handle and body of the cradle shorter than usual, but the scythe of the common length.

He was always unwilling to associate with children of his own age, but preferred the society of young men, and was unwilling to go to the same school with children, and not acquiring a fondness for books, he seemed to be dull in learning to read, write, and cypher, but had a great fondness for mechanical pursuits, and at ten years old, made himself a pair of boots, and has been a shoemaker for the neighborhood ever since. In the blacksmith shop, also, of his father, he exhibited equal ingenuity, in making and perfecting blades for penknives, and razors, or any thing else he chose to make.

His parents and himself concur in thinking that he arrived at maturity at the age of nine, at which time he seemed to be, both in body and mind, what most other men are at twenty; and that his general appearance is the same now as it was at thirteen. He has no grey hairs in his head, and looks like a man from thirty to thirty-five years old.

He says he is sensible of a great difference in his feelings after laboring hard through the day, from what they were when he was twelve or thirteen; and although but twenty-three in October, yet he talks and acts like a man of forty-five.

He says he emitted semen between nine and ten.

He is a very healthy man, with a large full face, large head, short neck, of a grave and serious countenance, very active, and in conversation a man of ordinary capacity. His present height is four feet ten inches, and weight about 116 pounds.

These are the most material facts that I was able to collect from the interviews I had with Mr. Force and his friends; you can use them as you please. Although they did not say any thing about publishing the case, yet Mrs. Force said her son had always been a source of great anxiety and trouble to her, and perhaps notoriety would not lessen it.

Case of Pneumonia treated by the Thomsonian Practice; with Autopsical Remarks. In a letter from Dr. RICHARD CLARK, of Watertown, N. Y., to Dr. J. J. GRAVES, read before the N. Y. Medico-Chirurgical Society.

Mr. Hor, aged 41 years, was, on the 27th of January, very much alarmed from a violent cough and pain in his right side, which increased every hour. His own practice was resorted to by his wife and brother doctor. Once and again the steaming process was had recourse to, but no relief was obtained.

The pain in his chest at this time was more severe and continuous. A physician of the village hearing of his alarming situation, and the means resorted to, to cure him, called to see him. On examination, the usual symptoms of pneumonia were present. Pain over the right and lower part of the left side of the chest; difficult respiration; cough; tenacious and bloody expectoration. During the last forty-eight hours of his illness, he complained of great pain in his stomach and bowels. He died on the fourth day from the attack of the disease.

The treatment was the same from the beginning of his disease until his death. If, after one course or *routine* of steaming was ended, he found no relief, another was immediately got in readiness, until death closed the scene which showed them, alas! too late, that the body diseased will not last forever.

Examination of the body nine hours after death. On raising the sternum, the right lung did not collapse, and the whole of the lung was in a state of hepatization. It much resembled the liver in color; some parts of it, however, were much darker. It was indurated and heavy, and portions of it easily torn by the finger. Parts of it sank on putting it into water, while some portions of the left lung floated on the surface. The costal pleura was highly inflamed, and there were adhesions between it and the lung; likewise between the lung and mediastinum. There was one pint of bloody water in this side of the chest. The same state of things existed in the left side of the chest, except not in so high a degree. The mucous membrane of the stomach was red and thickened, and very soft, easily separated from the muscular coat. The blood vessels of the stomach were large and crowded with blood. The coronary veins of the stomach were in the same state. The stomach was filled with a liquid strongly impregnated with red peppers, of which he took a large quantity before his death. The mucous membrane of the duodenum was the same as that of the stomach. The small intestine were healthy; liver healthy. No farther examination was made.

MISCELLANIES.

New York Medico-Chirurgical Society.—A number of physicians of this city, desirous to improve themselves in a knowledge of practical medicine and surgery, formed themselves, during the

last summer, into an association under the above title. The means by which they propose effecting the important objects in view, are the reading of original essays, the detail of cases, and the discussion of medical topics generally. Their meetings are held every fortnight, and have been thus far attended with great spirit and auspicious promises. A number of interesting papers have been read, cases without number have been detailed, and the most animated, yet amicable, debates elicited.

Among the advantages which the members of the society have already derived from their association, is that of the frequent opportunities which they have mutually derived from the autopsic examinations that successively occur in each other's practice. An interesting field is thus opened for pathological investigation, and practical improvement. By order of the Society, the committee of publication have selected the most important items from the transactions, and herewith communicate them. A regular series will be continued in the successive numbers of this Journal.

At the meeting held on July 30th, 1829,—Dr. TESSIER read the history of a case of precocity occurring at Quebec, Lower Canada, in a young girl now eight years of age, who began to menstruate when scarcely four years old. At her birth she possessed the ordinary size, was generally healthy, regularly vaccinated, had the measles, cut her teeth early and with great facility. When she had attained four years of age, the *mons veneris* was perceived to be covered with hair, and her growth had been so rapid, that she now had the appearance of a girl twelve or thirteen years old, the age at which menstruation usually commences in Canada; her breasts were full, and menstruation actually took place. Her mind did not make advances proportionate to that of her body.

At the meeting of August 13th,—Dr. F. O. DOUCET read an essay on the advantages and disadvantages of Pathological Anatomy. (Published among the original essays in this number.)

Dr. D. L. ROGERS detailed an interesting case occurring in an infant, which died in consequence of the lodgment of a thimble in the upper part of the *œsophagus*. The thimble was open at both extremities, and allowed the passage of food and medicines. Its presence had not been suspected! The infant died from inflammation on the tenth day. A preparation of the morbid parts was exhibited.

At the meeting of August 27th,—Dr. W. HIBBARD read the history of a case of fractured cranium, with loss of a considerable part of the substance of the brain, but which, nevertheless, recovered.

Dr. JOHN JAS. GRAVES read a letter from Dr. RICHARD CLARK of Watertown, N. Y., giving an account of a case of pneumonia treated by the Thomsonian practice, with autopsy. (See Domestic Intelligence in this number.)

Dr. JOHN S. BOWRON read an essay on puerperal apoplexy.

At the meeting of September 10th,—Dr. DAYTON related a case of epilepsy, terminating in apoplexy, which proved fatal in a few hours.

Dr. ROCKWELL detailed a case of obscure gastro-enteritis terminating fatally.

At the meeting of September 24th.—Dr. JOHN S. BOWRON read a highly interesting essay on fever, in which the opinion was defended that fever always arises from some local affection.

Dr. DAYTON exhibited the stomach and part of the intestines of a young woman who had poisoned herself by arsenic. The viscera bore evident marks of acute inflammation.

Dr. D. L. ROGERS related the details of an operation which he had successfully performed for *the extirpation of a very large ovarian tumor*. The case was one of the first importance, and when published will undoubtedly attract general attention.

At an extra meeting held on October 1st.—Dr. BAXTER read an essay on cholera infantum. A lengthened and spirited discussion was then entered into on the merits of the views of fever advanced by Dr. Bowron in his communication made at the last meeting.

At the meeting of October 8th.—Dr. DAYTON exhibited the stomach and intestines of a man who had died after a lingering and protracted fever of the remittent type. The case had at one time promised to yield to the treatment employed, which was fully detailed, but relapsed in consequence of neglect in diet and overfeeding. It then assumed a low and malignant aspect, and terminated fatally with aggravated symptoms, delirium, hemorrhages dark and offensive, subsultus tendinum, yellow skin, &c. Tonics and stimulants had been used in the last stages, and with evidently good effects. An animated debate was, however, had on the propriety of this course, it being condemned by those who regarded the malignant symptoms as so many evidences of gastro-enteritis.

Dr. D. L. ROGERS related a case of hernia occurring in the inguinal canal. The nature of the case had not been suspected until after death; but it had been treated as a case of colic. The narrator then entered into some remarks on the diagnosis.

The same gentleman also related some experiments which had been lately made to ascertain whether there was any direct communication between the mother and fœtus. The result was not favorable to the supposition of such direct union.

At the meeting of October 22d.—Dr. JOHN L. SUCKLEY read an essay on diagnosis.

Dr. BOWRON reported a case of tetanus in a female, originating from intense grief, and relieved by powerful antispasmodics. Some remarks were added, tending to prove that tetanus always resides in the nerves of motion.

Secret Medical Association.—We extract the following article from the report of a "Trial of a suit brought into the District Court for the City and County of Philadelphia, by GEORGE McCLELLAND, M. D., against FRANCIS S. BEATTIE, M. D., for a Libel," and we do so, without any other comment than the expression of a sincere hope, that the medical atmosphere of New York is untainted by the exhalations of any *branch* from such a parent stem.

"This gentleman is said to be a member, as are also Dr. Ritchie and Dr. Coates, of an association called the Kappa Lamda Society. That they are positively so, cannot be certainly pronounced, because the organization of that association is *secret*, and membership may be suspected, but not absolutely known. This society comprises, probably, a great deal of individual respectability, being composed of more than fifty, perhaps seventy, physicians of this town. Its existence, however, is an opprobrium to the medical profession, and its tendencies manifestly evil. Dr. Benjamin H. Coates, in the course of an examination on his solemn affirmation, in a cause recently tried, was interrogated as to some matters connected with the character of this association. He at first declined giving any information, but being reminded of the compulsion under which he stood, he let out these characteristic particulars, viz. that the association is a *secret* one, and that the members, on being admitted, take an oath or solemn affirmation, binding themselves to mutual, but secret aid and support. In what manner they pass their time at the meetings of the association, or how their common funds or united efforts are applied, has not been made known.

"Surely no honorable purpose in professional life can require the aid of such a combination. Men may find advantage in secret societies for personal and gainful ends; but science, knowledge, virtue, and character, must flourish best in open light. In a profession in which success depends on talent, education, and industry, concealment of every kind has long been resigned to quacks, as fitting the degraded means by which persons thus denominated pursue their aims. In this enlightened age, in this intelligent and virtuous community,—that well educated members of one of the proudest of all professions, should seek for means of advancement in secret associations, and secret oaths of support, cannot but excite our special wonder. The proper course for a physician is easily designated. To study the science thoroughly, to practice faithfully, to deal with his competitors candidly, and to publish, in some form or other, whatever additions to the common stock of medical knowledge he may chance to acquire, such is the direct road to eminence, lying broadly open, and far preferable to any tortuous or hidden path that shuns the light of day. It is not difficult for one that sees even the surface of medical politics in Philadelphia, to discern some of the bad fruits of this disputable association. Indeed examples are easily cited. When the gentleman above named was compelled to disclose the fact of the secret oath, &c., he added that he entertained no sort of respect for any physicians, with very few exceptions, indeed, who do *not* belong to that association! Afterwards, having conversed with his friends, he thought proper to recant or explain away this rash expression; but the feeling which prompted it, and the source from which that feeling sprung, are too obvious to be misunderstood. Dr. Reynell Coates, also, who gave testimony in that case, and was doubtless regarded by the jury as a perfectly impartial witness, said very frankly to a gentleman in the court room, that he was the warm personal enemy of Dr. M'Clellan, and the warm personal friend of Dr. Beattie. Now it is be-

lieved, that no circumstance can account for this enmity, except that Dr. M'Clellan is *not* a member of the Kappa Lamda Society, and falls therefore under the ban denounced previously by Dr. Benjamin H. Coates. It will be observed, that this was no expression of disapprobation, but of *enmity*,—a sentiment that cannot have been excited by anything that has ever occurred in the intercourse, whether personal or professional, between Dr. M'Clellan and Dr. Coates. Dr. Beattie is a member of the association, according to the statement of Dr. B. H. Coates.

“Two of the pernicious consequences of a secret cabal are thus developed—the spirit of exclusiveness and proscription that condemns or approves by the single test of fellow membership in the secret league, is one; and the animosities, misconstructions, misrepresentations, and false estimates of character that must flow from it, are too evident to need particular indication;—the other is the doubt that must hang on all testimony borne by medical men, whether in a court of justice or in society, if it is at all to be tinged or colored by hidden partialities arising from concealed associations, and by unrevealed obligations resting on secret oaths!

“An association of this kind realizes all that has been urged or suggested against masonry, by its warmest enemies—without the pretence, however, of being able to supply that exercise of charity which is the real boast and virtue of the masonic institutions.

“It is said that the Kappa Lamda Society has branches elsewhere; or, perhaps, this may be but a branch whose baneful root is in some other community. If so, the civil agency of such an instrument of mischief may be infinitely greater than is generally known. No professional character can be safe against an organized system of dispraise and injustice. This society publish a journal or *Medical Review*, purporting on the face of it to be fair and impartial. For a considerable time after the establishment of that journal, it sailed under false colors, bearing the names of certain respectable men as individual editors, while in fact it was published by the secret oath society. The impartiality of a *Review*, commencing with a display of *candor* like that, and conducted by fifty or more physicians, bound together by a solemn obligation of mutual commendation—can be readily appreciated!

“Some gentlemen who became members without knowing the real character of the association, have, it is said, declined to attend its meetings, but they are bound by the unlawful oaths that were administered to them there, not to expose the circumstances which move their honest disapprobation and disgust.

“The honorable portion of the medical profession ought to join, not secretly, but openly, to discountenance all such hidden contrivances to elevate particular individuals above their real merits, or to intercept the just reward of true excellence. Mutual support is due from all good men to each other, and if candor, liberality, and fair dealing be observed by the most elevated, the example will be followed by others, for the sake of appearance, at least, if not for the love of virtue. It is unquestionably so in the legal profession, why can it not be so in the profession of medicine?”

New York Medical Fees.—In compliance with the request of a number of subscribers, we republish the following list of medical charges, adopted by the Medical Society some years ago.

A list of Medical and Surgical charges established by the associated Physicians and Surgeons of the city of New York, Dec. 1815, and approved by the New York County Medical Society, Jan. 2d, 1816.

Verbal advice, - - - - -	From \$00 to	5 00
Letter of advice, - - - - -	- - - - -	10 to 15 00
Ordinary visit, - - - - -	- - - - -	0 to 2 00
Consultation do. - - - - -	- - - - -	5 00
After visits, each, - - - - -	- - - - -	3 00
Night visit, - - - - -	- - - - -	7 00
Visit at a distance per mile, - - - - -	- - - - -	1 50
Do. to Brooklyn, - - - - -	- - - - -	3 00
Do. to Powles' Hook, summer, - - - - -	- - - - -	5 00
Do. to Staten Island, - - - - -	- - - - -	10 00
Both these last to be double in winter or storm.		
First visit in epidemic, or other diseases, where personal danger is apprehended, - - - - -	- - - - -	5 00
Each succeeding, under the same circumstances, - - - - -	- - - - -	3 00
Vaccination, - - - - -	- - - - -	5 to 10 00
Each dressing of wound, - - - - -	- - - - -	1 to 5 00
Cupping, - - - - -	- - - - -	5 00
Bleeding in arm or foot, - - - - -	- - - - -	2 00
Do. in jugular vein, - - - - -	- - - - -	5 00
Dressing blister, - - - - -	- - - - -	1 00
Scarifying eye, - - - - -	- - - - -	5 00
Puncturing œdematous swellings, - - - - -	- - - - -	2 00
Inserting seton, - - - - -	- - - - -	5 00
Do. issue, - - - - -	- - - - -	2 00
Visits in haste to be charged double.		
Detention \$3 per hour.		
.....\$25 per day.		
Introducing catheter, - - - - -	- - - - -	5 00
Each succeeding time, - - - - -	- - - - -	2 00
Do. in females, - - - - -	- - - - -	5 00
Extracting calculus from the urethra, - - - - -	- - - - -	20 to 30 00
Reducing simple fracture, - - - - -	- - - - -	10 to 20 00
Do. compound fracture, - - - - -	- - - - -	30 00
Do. dislocations, - - - - -	- - - - -	5 to 20 00
Of the hip, - - - - -	- - - - -	30 to 50 00
Reducing prolapsus ani, - - - - -	- - - - -	5 00
Do. hernia, - - - - -	- - - - -	10 to 25 00
Opening abscess, - - - - -	- - - - -	1 to 5 00
Amputation of the breast, - - - - -	- - - - -	50 00
Do. leg, - - - - -	- - - - -	50 00
Do. hip or shoulder, - - - - -	- - - - -	100 to 150 00
Do. finger or toe, - - - - -	- - - - -	10 00
Do. penis, - - - - -	- - - - -	20 00
Extirpation of testis, - - - - -	- - - - -	50 00

Do. of eye, - - - - -	100 00
Do. tonsils, - - - - -	25 00
Do. tumor, - - - - -	5 to 50 00
Perforating rectum, - - - - -	25 00
Do. nostrils, external ear, vagina, or urethra, - - - - -	5 to 25 00
Dividing the frenum linguæ or penis, - - - - -	3 to 5 00
Paracentesis of abdomen, - - - - -	15 to 25 00
Do. of thorax, - - - - -	50 00
Operation for tic doloureux, - - - - -	25 00
Do. for harelip, - - - - -	25 00
Do. for hernia, - - - - -	125 00
Do. fistula in perineo, - - - - -	50 00
Do. fistula in ano, - - - - -	50 00
Do. for phymosis, - - - - -	10 00
Do. fistula lachrymalis, - - - - -	40 00
Do. paraphymosis, - - - - -	10 00
Do. wry neck, - - - - -	50 00
Do. depressing cataract, - - - - -	125 00
Do. extracting do. - - - - -	150 00
Do. anterior of Saunders, - - - - -	25 00
Do. popliteal aneurism, - - - - -	100 00
Operation for carotid aneurism, - - - - -	200 00
Do. for inguinal or external iliac, - - - - -	200 00
Do. brachial, - - - - -	50 00
Do. radial, tibial, or ulnar, - - - - -	25 00
Lithotomy, - - - - -	150 00
Bronchotomy, - - - - -	25 00
Trepanning, - - - - -	100 00
Circumcision, - - - - -	10 00
Common case of midwifery, - - - - -	25 to 35 00
Tedious or difficult labors, - - - - -	36 to 60 00
Case of gonorrhœa, - - - - -	15 to 30 00
Do. syphilis, - - - - -	25 to 100 00
Preparing and administering enema, - - - - -	2 00
Visit on board a vessel at the wharf, - - - - -	2 50
Do. in the stream, - - - - -	5 00
Do. at Governor's Island, - - - - -	5 00
Do. for opinion involving a question of law, and in which a physician may be subpoenaed, - - - - -	5 00
Extracting tooth at the patient's house, - - - - -	2 00
Do. at the surgeon's, - - - - -	1 00

Pharmaceutical Charges.

A single prescription furnished, - - - - -	0 50
Pills, per dozen, - - - - -	0 75
Boluses, each, - - - - -	0 50
Electuaries per ounce, - - - - -	1 00
Infusions per lb. - - - - -	2 00
Solutions per lb. - - - - -	1 50
Tinctures per ounce, - - - - -	0 50
Ointments and cerates per ounce, - - - - -	0 50
Blistering plaster, according to size, - - - - -	1 50 to 2 00

Other plasters, - - - - -	- \$0 50 to 2 50
Decoctions per lb. - - - - -	- 2 00
A single medicine dispensed without visit, - - - - -	- 1 00
An anodyne draught, - - - - -	- 0 50

Medical Society of the City and County of New York.—Extract from the minutes of a meeting held on the 12th of October, 1829.

“The following preamble and resolution, offered by *Dr. Peizotto* and seconded by *Dr. Stearns*, were adopted.

Whereas much inconvenience arises from the present mode in which prescriptions are sent to apothecaries, and charges of a want of scientific accuracy are frequently alleged against physicians, which, in a great majority of instances, are wholly unmerited, and may be traced to the errors of ignorant pretenders and quacks, therefore,

Resolved, That it be recommended to the members of this Society, in all cases, to affix their names, or the initials of their names, to their medicinal prescriptions.”

It is hoped, that the obvious propriety of the above measure, unanimously adopted by the Medical Society, will commend its observance to the profession in general.

Dr. D. L. ROGERS, has kindly promised us a detail of his successful operation, for the extirpation of an ovarian tumor. It shall appear in our next number.

Mr. C. S. FRANCIS has published, in a very neat folio form, “*Illustrations of the principal regions of the Human Body in relation to Surgical Anatomy.*” It contains twelve plates, accompanied by letter press explanations, and is well worthy the attention of every student of medicine.

TO STUDENTS OF MEDICINE. *Hospital and Infirmary Reports.*—A complete copy of this Journal, from the commencement of the new series, will be furnished at any time, in return for regular, well authenticated, and full reports of cases treated at any of the public infirmary institutions, in this country or elsewhere. The names of successful reporters will in all cases be conspicuously published, unless otherwise directed.

Gregory's Practice of Physic.—The first New York edition of this valuable work, with notes, by the Editor of this Journal, is in press, and will very speedily be published, in one volume 8vo.



Dr. D. L. Rogers. Case of Ovarian Tumor.



Leach del.

W. Swan Sc.

NEW YORK

MEDICAL AND PHYSICAL JOURNAL.

JANUARY, 1830.

ART. I. *Remarks on Burns.* By RICHARD K. HOFFMAN, Surgeon U. S. Navy. Being his Inaugural Thesis for the degree of M. D., submitted to the College of Physicians and Surgeons of New York, in 1820.

[Concluded from page 78.]

WE believe, as will more fully appear, that a burn is an inflammation, and that in the treatment of this, as of all other diseases, we should be governed by a due consideration of the cause which excites the disease. We must not however infer, that because bleeding and purging are properly employed to relieve an inflammation of the liver, of the lungs, of the brain, or of the kidneys, where it is our object to prevent suppuration, and where plethora of the system is often primarily the cause of the disease, they are also necessary here, where the cause is external and independent of the system, and where our intention must, in most cases, be to induce suppuration, an event which, in other cases, it becomes our most important duty to guard against.

We shall attempt to show, in opposition to the prevailing opinions on this subject, that *the action of the parts* is not increased, but diminished; a conclusion which the successful practice of Dr. Kentish would of itself establish, could we adduce no other evidence of its truth. The theory of a debilitated and distended state of the capillaries of an *inflamed part*, is new only in its application to burns. We shall also attempt to show, that when symptomatic fever supervenes, it is the result of irritation, which this state of the capillaries, and the concomitant irritable condition of the nerves of the part affected, produce on the system at large. If we admit, with

Mr. Dickinson, the influence of sympathy in this case, it must be indirect, the action of the part affected being diminished.

“Within certain limits, (observes Mr. Dickinson,) the sensibility of the injured surface will be painfully augmented, a *determination of blood to the part* will ensue, accompanied by increase of heat and vascular action.”

In a somewhat higher degree, serous effusion will take place in some parts, while in others the surface may be actually destroyed—the vicinity, not involved in this complete destruction, being in the state of increased excitement above mentioned.

“So long as the injury is within the limits of increased action, although attended by vesication from serous effusion in some parts, and in other parts by a complete destruction of a certain extent of surface, the general derangement of the system will participate in kind and in degree proportioned to the severity of the topical affection and constitutional diathesis. The symptoms of this derangement are a *shivering*, succeeded by heat, increased action of the heart, thirst, white tongue, high colored urine, constipation of the bowels, sometimes hurried respiration, headache, phrenitis, coma, in a word, to adopt the language of nosologists, a synocha arising in the system from topical inflammation.

“When a burn or scald is very extensive and particularly severe, the increased excitement produced by so inordinate a stimulus is sometimes rapidly succeeded by general debility, insomuch that mortification and death will be liable to ensue from the sudden exhaustion of the vital powers. It is in this case *that a difference in the scale of degree at length arises to a difference in kind*. The symptoms are continued shivering, small and frequent pulse, great debility, and the mortification of parts involved in the injury, which were not at first destroyed by the actual contact of the injurious caloric.

“Besides the local injury, and the concomitant or consequent general affection, in very severe burns or scalds, there is often experienced a singularly alarming seizure, or shock of the nervous system. It is sometimes manifested by a degree of irritation and dread, of sudden horror, impatience, *trembling*, and *shivering*, apparently disproportioned to the extent of real suffering. This suffering of the nervous system is something very peculiar, and perhaps little understood. I have reason, however, to know from experience of the fact, that weakly and irritable constitutions, especially aged people and children, have been suddenly carried off by the overwhelming impression of this shock, on occasions when, to every appearance, they might have incurred little danger

from the extent and degree of injury abstractedly considered."

In relation to the mode of treatment to be pursued in these varied degrees of burns, Mr. D. observes—"In burns, and scalds, where there is increased action alone, we have nothing to *apprehend* from the sedative operation of cold applications, or from those which rapidly abstract caloric by their evaporation. The more powerfully we apply the means of reducing the excess of heat and vital action, and the more pertinaciously we continue their employment, the more immediate, complete, and permanent will be the relief we shall afford, and the better will be the *chance* of preventing vesication, from the termination of increased action in serous effusion, and of sympathetic fever from the general increased excitement. Here spirits of wine, fluid volatile alkali, æther, *oil of turpentine*, gin, brandy, diluted spirits, ice, cold water, goulard, warm water, (we would ask if this be not vague practice?) or any other means possessing the power to abstract preternatural heat from the injured part, may be copiously and assiduously applied.

"When symptoms of general disturbance arise, participant of this degree of topical injury, they are to be subdued by the ordinary measures for reducing increased excitement of the system, by bleeding, aperients, and the antiphlogistic regimen.

"In the kind of burns and scalds where exhaustion of the system has supervened to excess of action, recourse must be had without delay to measures of a moderately *stimulant agency*, directed both to the local injury and the general system. Tepid water, with the addition of alcohol; *warm essence of turpentine*, followed by a dressing of warm digestive ointment, or warm cataplasms of bread and milk, are applications proper for the occasion. While opium should be administered internally to relieve pain, a cordial to support the *depressed energy* of the nervous system, and nourishment to maintain the strength, attention should be paid to the bowels to prevent undue accumulation.

"When the nervous system suffers in the manner above described, no time should be lost in our endeavors to tranquilize the sufferer, by administering such a dose of opium as will generally be found to alleviate nervous irritation and excessive pain; together with such cordial means of supporting the *vis vitæ*, as the symptoms of general disturbance may appear to demand."

The opinions of Mr. Dickinson, in brief review, are as follows:

1st. "When the injury from a burn or scald is not severe, there only results topical inflammation, with perhaps slight vesication. The cuticle is not detached, and the means of diminishing heat and vascular action are fully sufficient to effect a perfect cure. Such means may consist of warm or cold, aqueous or spirituous, applications. I have, however, generally given a preference to spirits, when so employed as to guard against a stimulant effect."

2d. "If the cuticle be detached, the sensation produced by severe cold, as well as by the stimulus of a spirituous application, cannot be borne without great pain. In these cases, the spirits may be diluted, or applied in the manner suggested by Mr. Parkinson;* or such other means may be had recourse to as will produce a soothing and anodyne effect, namely, the essence of turpentine reduced with olive oil; caron oil; Goulard's cerate; tepid water; and if the injury has been so violent as to produce tremor, weakness, and cold shivering, with increased pain from the contact of the common atmosphere, *warm essence of turpentine* may be applied, and the parts subsequently defended by plaisters spread with any mild ointment; or warm emollient cataplasms may be deemed more congenial with comfort in particular cases."

3d. "If the injury produces constitutional derangement, it must be either from increased excitement, or from exhaustion of vital energy by the previous excess of action. In the former case, a depletory and antiphlogistical regimen is indispensable. In the latter, a judicious plan of supporting the powers of life by cordials and appropriate nourishment must be required."

4th. "In almost every case of great severity, the irritability of the sentient system will demand the interposition of anodynes to procure immediate relief. In addition to this, a sufficient dose of opium must be administered, auxiliary to the employment of sedative applications."

Having thus presented a summary of the doctrines and practice of the most eminent writers on burns, we shall conclude with some remarks of our own.

Professor Heister, the sage Boerhaave, and all succeeding authors, if we except Dr. Kentish, have identified burns with inflammation. The symptoms of redness, heat, pain, and a degree of swelling, which is limited by the dense texture of the skin, as well as the termination of burns in resolution, or the effusion of serum, in suppuration, gangrene, and sphacelus, justify the conclusion. This analogy, however, has

* Previously applying a thin bladder to the parts.

been too much associated with the idea of an increased action in the vessels of the part, and given an injurious prevalence to a sedative and antiphlogistic method of treatment. The success which attended the practice of Dr. Kentish, and the treatment recommended in severe burns by Mr. Dickinson, authorize this remark, and we think it will derive additional support from a different view of the subject, in relation to the state of the parts, or the proximate cause of burns.

Messrs. Allen and Lubbock, in the Medical Society of Edinburgh, about thirty-five years since, advanced and supported a theory directly opposite to the opinion then prevailing, upon the subject of the proximate cause of inflammation.* They contended that inflammation is always attended by relative debility of the muscular powers of the capillary arteries. Dr. Wilson has since very ably defended the same opinion.† Neither of these gentlemen seem to have been aware that professor Vacca Berlingherii had, so early as the year 1765, laid down the same position. Another learned writer tells his readers, without meaning at all to derogate from the merits of Messrs. Allen and Lubbock, that he had long held the same opinions. Dr. McLean remarks, that he communicated a similar opinion with regard to the proximate cause of inflammation, to Dr. Duncan in 1793; and until the time of his publication, 1809, conceived his ideas to have been entirely original. Latta has very briefly advocated the same opinion, without any notice of the original author. "Inflammation," says he, "must appear rather to consist in a paralysis, than a spasm of vessels immediately affected."

A certain degree of uncombined caloric, (boiling water, for example,) operates on those exposed to its action in so rapid a manner that there is no perceptible interval between the application of the cause, and the production of its pernicious effect. Did it operate as an *irritating* cause alone, its effects would not be so instantaneously excited. From its well known expanding power, it is reasonable to infer, that the particles of caloric insinuate themselves, and, by their repelling power, suddenly distend the capillary vessels, by rarefying their contents. An afflux of blood to the part will follow this irritation, the accumulation will further distend and debilitate the minute vessels, and this preternaturally distended and debilitated state of the capillaries we believe to constitute the prox-

* See Inaugural Dissertation, by A. H. Stevens, M. D., Surgeon of the New York Hospital, on the proximate cause of inflammation.

† "It appears then, from the foregoing experiments, that the state of the capillaries in an inflamed part, is that of preternatural distention and debility." Wilson Philip, vol. ii. p. 16.

imate cause of *burns*, “*quae præsens, morbum facit, sublata tollit, mutata mutat.*”*

This view of the proximate cause of burns, will lead to a local method of treatment, similar to that recommended by Dr. Kentish, which has received such general approbation, and which is diametrically opposite to that inculcated by the theory of Mr. Dickinson in the slighter cases of burns, “where there is increased (we would say diminished) action only.” We are not governed by theory alone, but think that observation, experience, and even the advice of Mr. Dickinson himself, will justify a preference of local stimulant applications.

“In these cases, (says Mr. D.) spirits of wine, fluid volatile alkali, *oil of turpentine*, gin, brandy, &c., may be copiously and assiduously applied: again, when the epidermis is detached, the best applications will be found to be diluted spirits, tepid water, olive oil, or linseed oil, carron oil, Goulard’s cerate, or the *essence of turpentine* reduced by admixture *with oil.*”

Oil of turpentine, applied to the sensible and irritable skin of an infant, will produce inflammation; by evaporation it may have some effect “*in diminishing heat and vascular action,*” but we believe this effect to be very inconsiderable, in comparison with its *stimulating operation*. Mr. Dickinson observes, (page 93,) “when moderate stimulants are required to raise the system from a state of debility occasioned by the previous inordinate excitement, the *oil of turpentine* then becomes a useful application; it presents a valuable medium between the extremes of stimulant and sedative agency, either of which effects may be produced by the particular manner of conducting its employment.”

We prefer the oil of turpentine as a stimulant application, from an impression that it has something peculiar in its curative operation; it promotes the suppurative process, (when this is unavoidable,) and it discusses slighter burns more certainly than sedative applications; it also allays pain, and the relief which it generally affords, in one or two hours at the extent, is permanent. The recovery is, *cæteris paribus*, more rapid, the cure more perfect, the restoration of skin more complete, and less liable to crack and ulcerate afterwards, and less sensibly affected by cold, when treated with oil of turpentine, than when sedative or mild applications have been used.

If the burn be slight, it may be discussed by stimulant applications, exciting the debilitated vessels to a due action, and

* Gregory’s *Conspectus Med. Thoreticæ*.

counteracting their debility. *If the injury be more severe in its degree*, and stimulant applications are inadequate to the fulfilment of the first intention, the preternaturally distended and debilitated state of the vessels of the parts continues, and the local irritation produces febrile excitement, or an increased action of the heart and arteries generally, which induces suppuration, a necessary and salutary consequence, and essential to the process of cicatrization. This general excitement, we believe, will seldom go on to a morbid excess, when the proper stimulant applications are employed to counteract the local cause which gives rise to it. When burns terminate fatally soon after their infliction, and before suppuration is induced, the effect may be ascribed to a *depression of the vital powers*, and not to increased action.

If a still greater degree of caloric be applied, or its action is continued for a longer time, the vitality of the parts may be so much impaired as to preclude the possibility of restoring their action, or the skin and subjacent parts may at once be converted into an eschar by the disorganizing influence of caloric. In these aggravated cases, the tedious processes of suppuration, sloughing, granulation, and cicatrization are required to effect the regulation of the parts destroyed. The propriety of preserving the strength in this case is apparent, when we consider the arduous and salutary duty which circumstances impose on the powers of the system. This economy of strength becomes more important, in proportion as the injury is more extensive. The power of the enemy is augmented, and we should, as allies, not only support, but reinforce, the invaded system, to enable it to act more efficiently on the defensive. In these extensive burns, in which almost the whole surface of the body, or the face, neck, shoulders, breast, superior extremities, and legs, are burnt, (as in scorches from the explosion of gunpowder,) the patient is commonly seized immediately after the accident with violent shivering, or rigors, much precordial anxiety, with oppression of breathing, while the pain is *burning* and extreme. These are the seven cases which Mr. Dickinson has in view, when he observes—“If the injury goes beyond *the limits of increased action*, general debility rapidly succeeds to the previous increased excitement, insomuch that mortification and death will be liable to ensue from the sudden exhaustion of the vital powers.” It is in this case, that he considers the scale in the degree of injury, to amount to a difference in kind. This general debility, or sudden exhaustion, is so immediate an effect (or rather concomitant) of severe burns, that we think it cannot with propriety be ascribed to the pre-

vious excess of excitement, produced by the powerful stimulus of heat. The system has not had time to react, and produce the debility and sudden exhaustion in question. These alarming symptoms we believe to be produced by the excessive irritation which the nervous system suffers, and which prostrates its energy in a manner analagous to the operation of marsh miasmata, in the cold stage of a quartan intermittent, or to that of the variolous contagion, the plague, or the depressing passion of fear. The pulse in these cases is so small and weak as to be scarcely perceptible, and the patient will sometimes sink under this overwhelming shock.

Of seventy-nine of the crew of the U. S. ship *Essex*, wounded in Captain Porter's engagement with the English ships at Valparaiso, sixteen were cases of severe burns from the accidental explosion of some carronade cartridges. The heated gases which (in some manner not yet satisfactorily explained) are generated by the explosion of gunpowder, have the power of igniting combustible bodies; and while the caloric severely scorches the skin, it destroys the hair, eyebrows, and eyelashes of those who are exposed to it. The common dress of our seamen in warm weather, is a duck frock and trousers: for ornament, the loop of a black handkerchief is carelessly thrown round the neck, which, with the breast, is usually left uncovered. They frequently roll up their sleeves when they go into action, and under these circumstances, when men are thus exposed and crowded on the deck of a ship, the accidental explosion of gunpowder is particularly detrimental, and the burns produced by it are of the most serious kind.

Some of these men were burnt over the surface generally from head to foot, and almost all had two thirds of the skin scorched or burnt. With my inexperience, I resorted at first to the use of cold water. The chilliness and shivering which all complained of were increased by it, and its use was immediately desisted from. Sheets were then lubricated with olive oil, and the miserable sufferers were enveloped in them. Anodynes were given to allay pain, but they suffered excessively. William Jennings, a young man, died the next day from irritation. Some were seized with acute pain in the breast, with difficulty of breathing, and anxiety. The pulse was small and weak, not full nor tense.* I gave tincture of opium, with spirits of nitrous ether, but did not bleed. The inability of the patient to move or turn in bed, precluded the use of cathartics. The application of olive oil was continu-

* These remarks are taken from those I made in writing at the time.

ed. George Wyne, a middle aged man, died on the sixth day; no suppuration had taken place. In the worst cases the cuticle did not separate from the true skin, and rise from the effusion of serum, as was observed in the less severe cases. Suppuration was protracted to the fourth, fifth, and sixth day, in some cases. When this occurred, the sufferings of the patient were somewhat mitigated. Turner's cerate was substituted for the oil; tea, chocolate, toast and barley water, had been used as drinks. The abundant fruits of the country, milk, and soup, constituted their diet. The pure wine of Chili, diluted with water, was now allowed them; all possible attention was given to the state of the bowels, to obviate costiveness. The discharge of pus became profuse; bark was administered with the wine; chalk was applied, but not coming away with the dressings, it confined and retained the pus, and rendered the sores more offensive. Fahrenheit's thermometer ranged at 73 in the shade. We have mentioned the death of two of these unfortunate men; five were added to the list, two of which were old. In all of them, deep ulcers had formed, from sloughing of the skin and cellular membrane, in different parts; low muttering delirium in some, in others, delirium ferox, preceded the fatal event.

I respect the memory of these men, and cannot omit a more particular mention of them, and their unhappy fate.

William Jennings, seaman, a young, healthy man; burnt from head to foot—died 29th March, (1814,) the day after the battle.

George Wyne, seaman, middle aged; severely burnt over the body generally—died 4th April.

Nathaniel Jones, captain of the mast, an old black man; face, neck, breast, arms, and legs, deeply burnt—died 8th April.

Philip Thomas, seaman, a young man—after severe sufferings from deep burns, died 9th April.

William Smith, boatswain's mate; face, neck, arms, hands, and body, down to the hips, deeply burnt—died 12th April.

Thomas Brannock, seaman, middle aged; very severely burnt—died 12th April.

William Christopher, seaman, elderly man; face, breast, hands, arms, legs, and feet, deeply burnt—died 20th April.

These patients, from the severity of the injury, would have died, I believe, under any mode of treatment; but subsequent observation has convinced me, that the survivors would have suffered less and recovered sooner, under a stimulant plan of treatment.

I am conscious of the inefficacy of the course of practice pursued in these distressing cases: the treatment was neither antiphlogistic nor stimulant. Advocates for the former plan may urge that the patients should have been bled, but the only indication for this arose from the pain in the chest, and oppression of the lungs, which affected some of the patients on the second day, and these subsided under the use of anodynes; and none died with particular symptoms of pulmonary affection.

We will offer a few remarks in relation to this subject.

The skin we know performs an office analogous to that of the lungs, in extracting carbon from the blood: by the interruption of this particular function we may account for the peculiar oppression which the lungs suffer, when a large surface of the body is burnt. From the circumstance of the kidneys not being particularly affected in these cases, the affection of the lungs has been ascribed to a *peculiar sympathy* between the skin and lungs. The kidneys, however, do probably suffer, by the general derangement of the functions of the skin, though, from their inferior importance in the animal economy, the affection of these organs is not so particularly observed. We believe, however, that this derangement of the cutaneous functions has a more general influence on the state of the patient; that the retention of its natural excretions induces a putrescent tendency, by irritating the circulating fluids. *The debility, irritability, and the fatid secretions from the sores, and a similar condition of the excretions generally, in the last stages of fatal burns, evince a typhoid state of the whole system.* This putrescency of the fluids is now further increased by absorption of the secreted matters from the surface, where, from the heat of the body, the putrefactive fermentation of this now extraneous matter is very much accelerated. The low muttering delirium, and the delirium ferox, which preceded dissolution in these cases, afford additional evidence of the supervention of this typhoid condition of the system.

From these considerations, the impropriety of bleeding, we think, becomes apparent. But it may be urged, that if the *excitement** in the first stage had been reduced by depleting remedies, the mortification of the skin, and consequent sloughing and suppuration, would have been obviated or lessened. We believe these to have been the inevitable consequences of the primary injury which the parts sustained, for,

* We have seen that the pulse throughout was that of irritation, not of inflammation.

independently of the action of caloric, as such, the concussion produced by the sudden expansion of gases in the explosion of gunpowder (the men were thrown down the hatchway by force of the shock) appears to contuse the skin, and further impair its vital powers: to this we think the retardation of the suppurative stage, and the nonappearance of vesicles in the worst cases, may in part be ascribed. Stimulant and not inert applications should have been employed. With the persuasion that, if the errors were as often published, as the proud success of our practice is, the world would be much benefited, I here confess my negative faults. That there was an error in not using stimulating application, I think will further appear from the following remarks.

In Commodore Decatur's engagement with the Algerine admiral's frigate, in the Mediterranean sea, forty-four of the officers and crew of the *Guerriere* were wounded: thirty-two of this number, including midshipman Coxe, were severely burnt, by the bursting of a long twenty-four pounder on the gun deck: some of these received additional injury, by bruises from fragments of the gun, which killed five men outright.

To convey an idea of the extent of the injury in these cases, we will insert a few, taking them as they were arranged, alphabetically, on the list of wounded, which will afford a fair specimen of the whole.

James Armstrong—face, shoulders, back, arms, and hands, severely burnt.

Jeremiah Alderson—face, neck, arms, (including forearms,) and hands, burnt.

John Butler—face, neck, body, arms, and hands, burnt.

Midshipman Coxe—face, arms, hands, and knees, burnt; and contusion over the *latissimus dorsi* below the right shoulder blade.

Thomas Camel—face, neck, arms, and hands, burnt.

Cornelius Carrill—face, forearms, and one foot, burnt.

From my constant occupation at that time, the written observations made on the cases were but general, and as such I will offer them here. I had previously determined, in the event of an accident of this kind, to use the oil of turpentine as a local application. As it could not, under these circumstances, have been warmed without occasioning delay, it was applied *cold*; its relative temperature to that of the body, however, was increased by the warmth of the weather. Basins were filled with the oil of turpentine, and it was applied, unsparingly, by dipping our hands in it; roller bandages were then immersed in it, and applied to the burnt parts; the patients placed in cots, and covered, to lessen the evaporation.

It was intended to have removed this dressing, and substituted the application of plasters spread with the unguentum terebinthinæ, prepared according to the directions of Dr. Kentish, as soon as the necessary attention to the wounded would permit; I however found the patients comparatively so comfortable, after the lapse of an hour or two, (the pain having abated,) that it was thought advisable not to disturb them, but to leave the first dressing on till the next morning. The pain was so tolerable during the night, that most of them enjoyed some sleep. It should be observed, that anodynes had been given, to allay irritation and procure rest; warm tea was prepared for drink, in the evening. On removing the dressing the next morning, vesicles were observed to have formed in some places, and in others, the inflammation was partially discussed; the bandages were removed with ease, and without detaching the cuticle; the parts were exposed as little as possible to the air, to the impression of which the patients were very sensible, and the unguentum terebinthinæ was applied. This at first excited some pain, which soon subsided. Warm tea, lemonade, weak wine and water, were prepared for drink, at the option of the patient; and we deemed it proper to prohibit their usual allowance of whiskey. On the third day, the same dressing was used, and suppuration had commenced. Simple cerate was used as a dressing on the fourth day, and the vesicles opened by a small orifice as we applied it. The patients were allowed a choice of the above drinks, and sago and arrowroot were prepared, in addition to mutton soup, for those that preferred them; they were also allowed to eat the ship's rations, if they pleased. The action was fought on the 16th July. On the 22d, we received a supply of *fine oranges*, and other fruit, by one of our small vessels, from Carthage. On the 24th, I find the following remarks. "The burnt surfaces have suppurated and sloughed in some parts, kindly; granulations, where the burns are not very deep, are good, and, in some spots, cicatrization is going on. They are daily washed with tepid water to cleanse the parts, and afterwards with a saturated solution of alum in warm water; and then dressed with cerate made of olive oil and beeswax, spread on pieces of muslin, and this covered, where the discharge is great, with tow, or fine oakum, which both preserves more cleanliness, and enables us to apply the roller bandages more neatly; masks are cut for the face, to enable the patient to see and breathe through the openings. Tea, morning and evening; mutton soup, fruit, lemonade, and wine and water, for drink. Yesterday, all whose bowels were costive, took a cathartic of calomel and jalap made into

pills, with extract of butternut, (*juglans cinerea*.) In this stage, by the use of laxatives to obviate costiveness, and the solution of alum as an astringent wash, as circumstances required, the discharge from the suppurating surfaces was regulated and kept within due bounds. In some cases, fine muslin or linen, wrung out of the astringent wash, was substituted for the plasters of cerate, or alternated with their use, with the best effect. By this mode of applying the astringent solution, I have seen almost two thirds of the skin of the abdomen cicatrize in the space of twenty-four hours. Such was the general treatment. Anodynes were administered to allay occasional irritation, and procure rest, with the best effects. In extensive burns, especially when the affection is superficial, the cure in the suppurative stage will be accelerated, by preventing accumulation in the intestines.

Of these thirty-two cases, only two terminated fatally. Richard Johnson died the day after the battle, and Isaac Mitchell the ninth day. I find the following general remarks on this case, made at the time.

Isaac Mitchell, aged 35, seaman, of good constitution—face, neck, back, generally, both arms, from the shoulders to the fingers' ends, legs, and feet, burnt. The burnt surface, though not more extensive than in some other cases, was worse, having been injured deeper by the combustion of his clothes.* Treatment, like that adopted in the cases generally, and noticed in the preceding pages. The discharge from the surface at the two last dressings was *highly offensive*, and *putrid* in the extreme.† The functions, both of mind and body, deranged and prostrated, was very irritable and peevish, shedding tears, and uttering the most piercing cries, when the sores were dressed, which his perverted imagination told him was a flogging at the gangway, and he expressed more sufferings than were ever witnessed there. Dated 28th June, off Algiers.

On the 16th July, a month after the action, the list of burnt patients was diminished to nine, by recoveries, and these advanced favorably to a perfect cure—all deformities, by adhesions or contractions, being properly guarded against.

Doctor Blane observes, that the class of wounds most peculiar to a sea engagement are scorches from the accidental explosions of gunpowder, and that in most of the campaigns in which this distinguished physician had served, they were

* The dress of the men took fire in the Essex, also, and aggravated the injury in all cases.

† See page 41—on the typhoid, or septic state of the system, which the use of fruit in this case did not prevent.

very frequent and very fatal. The best application to the burnt parts (continues Dr. B.) was found to be linseed oil, which some of the surgeons mixed with lime water, others with cerate, and both compositions answered well. Opium was found of great use, in alleviating pain and procuring rest, care being taken to guard against costiveness, by the use of glysters. In the battles of 1780 and '81, one fourth part of the whole killed and wounded was from this sort of accident.

It appears, that in the campaign of 1780, of one hundred and sixty-seven men wounded and admitted into the hospital at Barbadoes, sixty-one died, nineteen were amputations, of which nine died, forty-six were scorched by gunpowder, of whom there died fourteen. If, then, we compare the result of these cases, and we can scarcely believe them to be more severe than those that occurred on board commodore Decatur's ship, the great disproportion in the number of deaths (of thirty-two on board the *Guerriere*, two died) clearly evinces the superior advantages of stimulating local applications in the first stage of burns.

When children are the subjects of burns, or scalds, we would recommend caution in the employment of the oil of turpentine, as the sound skin, from its sensibility and greater irritability, would be inflamed by it. In these cases we think it would be prudent to omit the use of turpentine by itself, and to apply it mixed with a larger portion of the yellow basilicon spread on plasters, adapted to the size of the burn. From the greater irritability of children, anodynes, as the elixir parigoric, or tinct. of opium, become more necessary.

Much may be gained, in the latter stages, by attention to the bowels, and the use of proper astringents externally, when the suppuration is profuse. We have found the solution of alum (sulphas aluminis) very efficacious; it necessarily causes some temporary pain, but its good effects more than counterbalance this. The venerable doctor Bard speaks highly of the solution of the sulphate of zinc for this purpose; and we think either decidedly preferable to the carbonate of lime, recommended by Dr. Kentish; a great objection to the use of which is, that it does not come off with the dressings, and, by retaining the secreted pus, renders it offensive, especially in warm climates. Nature will easily supply all the necessary constituents of the cuticle, "or shell," when the parts shall have been prepared for its reception.

We will now conclude our opinions, under the following heads.

1st. When the injury from burns is not severe, there only results topical inflammation, with perhaps slight vesication. The means of promoting the circulation in the part, and stimulating the debilitated vessels to a due action, are fully sufficient to effect a cure. The local plan of treatment, recommended by Dr. Kentish, we think most efficacious in fulfilling this indication. This consists in the application of tepid oil of turpentine, followed by plasters spread with the turpentine ointment, prepared as Dr. Kentish directs.

2d. If the cuticle be detached, and the injury so violent as to produce tremors, weakness, and cold shivering, with increased pain from the contact of the air, the same local treatment should be resorted to.

3d. If the injury produces constitutional derangement, it must be either from increased excitement, produced by the local irritation, or from diminution of the vital powers by the depressing influence of the disease. In the former case, if we merely obviate costiveness, depleting and antiphlogistical remedies will be improper, the excitement seldom exceeding the limits of salutary tendency. In the latter, a judicious fear of supporting the vital powers, by cordial and appropriate nourishment, must be observed.

4th. When the nervous system suffers great irritation, as evinced by almost insufferable pain, rigors, trembling, anxiety, and a peculiar oppression of the lungs, large anodynes, and warm stimulating drinks, should immediately be given to allay it; but these will occasionally fail in producing the desired effect, and death will sometimes ensue in a few hours, from this excessive irritation of the nervous system.

We are disposed to acquiesce in the reports of the good effects of cotton, as an application to burns. Being a non-conductor of heat, the caloric accumulates, and by stimulating the debilitated vessels, may be adequate to the resolution of slight burns. Mr. Dickinson acknowledges his inability to reconcile the common practice of holding the burnt part near the fire with his theory, while it admits of an easy explanation on that which we have inculcated.

ART. II. *Remarks on the Nature and Treatment of Purpura Hæmorrhagica, with Cases.* By S. W. AVERY, M. D., of New York.

THE names *purpura hæmorrhagica*, *hæmorrhæa petechialis*, *morbus maculosus*, *hæmorrhagicus*, &c. have been given, by different authors, to a disease characterized by purple

spots, resembling stains, preserving their color under pressure, sprinkled over the surface of the body, and accompanied by hæmorrhages from the mucous membranes, with or without fever, developed in constitutions and temperaments the most dissimilar, and no way connected with the ordinary causes of scurvy or of typhus fever.

Respecting the nature of this disease, much diversity of opinion still exists. Willan has placed it among the exanthemata, to which it evidently has not the least affinity; though, in his essay,* he declares that he "considered it, under all the forms described, as pertaining to scurvy;" and Cazenave, in his late valuable work on cutaneous diseases, says†—"Scurvy, when accompanied with spontaneous ecchymosis, and hæmorrhages, appears to be identical with the disease under consideration," (*purpura hæmorrhagica*), and after stating that "scurvy is only developed under the influence of a debilitating diet, fatigue, exposure to cold, damp, &c., while *purpura* may manifest itself in individuals who are not subject to any of these causes; that scurvy yields to the employment of tonics, and fresh vegetables, while *purpura hæmorrhagica* often resists these means," he adds, "but in admitting the complete identity between these two diseases, it is at the same time difficult to explain why the latter should manifest itself in persons placed in opposite conditions to those in whom scurvy is developed."

In order to place this subject, if possible, in its true light, it may be necessary to examine the nature and causes of *purpura*, and the constitutions and diseases of the system in which it is manifested. By *purpura*, or *petechia*, is meant certain spots or patches, commonly circular, varying from one to many lines in extent, assuming different shades, from a light red, to a livid or purplish black color, not fading under pressure, and appearing upon the skin, and sometimes upon the mucous surfaces in plague, typhus fever, scurvy, dropsy, and the several species of the *purpura* of Willan.‡

These spots are occasioned, says Bateman, not by an increased determination of blood into the cutaneous vessels, but by an extravasation from the extremities of these vessels under the cuticle. Whoever will take the trouble of carefully examining them will find, that generally they are not an extravasation under the cuticle, in the ordinary acceptation of the term, but as stated by Cazenave, an effusion of blood into the superficial layers of the dermoid tissue.§ This

* Lond. Med. and Phys. Jour. No. 115.

‡ Synopsis, p. 99.

† Cazenave on Cut. Dis. p. 378.

§ Caz. on Cut. Dis. p. 368.

effusion doubtless depends upon a peculiar action or condition of the extreme vessels.

Whether it is a process resembling secretion, or a loss of tone in the capillary tubes, suffering the blood to escape through them, our knowledge of them is too limited positively to decide; but the first hypothesis appears more consistent with the principles of the living economy, than the mechanical explanation of the latter. The immediate cause of this peculiar action or condition, there are many reasons for believing, is a loss of the equilibrium between the arteries and veins, or, in other words, an accumulation of blood in the large trunks leading to the right side of the heart; and if it were necessary, a great variety of facts might be brought forward, which would go far to prove that this is the case, in all the forms of plague, typhus, scurvy, dropsy, &c. attended by petechiæ. The following may suffice.

Of congestive typhus, Armstrong says*—"Petechiæ, in general, appear earlier in this, than in any other varieties of typhus, and in the last stage, there are sometimes gangrenous spots on the extremities, oozings of blood from the mouth and nostrils, and hemorrhage from the bowels." And again—"In examining the bodies of some patients, who had died in the most concentrated attacks of congestive fever, I have found the right side of the heart loaded with dark blood."† Indeed, most of the phenomena of this species of typhus, are considered by him as depending upon venous congestion. The writings of Lind, Trotter, and others, are replete with proofs of the existence of a languid action of the heart in scurvy, marked by slow feeble pulse, black appearance of the blood drawn, intumescence of the lower limbs, &c., all which may be referred to diminished tone of the heart, allowing an accumulation of blood in the system of the right side. Good says‡—"The digestive organs suffer first; they become weakened in their power, and for the reasons already stated, when treating of marasmus, the weakness will extend through the whole range of the digestive chain, and influence all the organs of assimilation, while the lungs, the brain, the heart, and the skin unite in the general debility." And though he believes a putrescent state to be the proximate cause, he says—"Girtanner, and other pathologists, who refer such scurvy exclusively to a looseness of the *solidum vivum*, have more to advance in their behalf, than those who refer it exclusively to a looseness of the fluids."

Purpurine spots are no very unfrequent concomitant of

* Essay on Typhus, p. 74. † P. 84. ‡ Study of Med. vol. 3, p 296.

dropsy, particularly of the kind removable by active evacuation. Dr. Stoker,* in his work on the humoral pathology, has given two cases of dropsy, which he considered, from a variety of circumstances, to have depended upon congestion in the mesenteric, hepatic, and hæmorrhoidal vessels. In one the purpura and dropsy commenced soon after the suppression of a long established hæmorrhoidal discharge, and in both the attack was produced by plethora, and more or less relieved by bloodletting. Sydenham and Blackall have given cases of a similar nature.

The old notion, that petechiæ in scurvy and typhus are indications of a putrid tendency, seems to be incorrect, from this circumstance, that in dropsy, as just stated, and in the simple and hemorrhagic purpura, exactly the same thing takes place, where the previous health and sudden attack preclude every suspicion of putridity. It seems not improbable, then, that an engorgement of a part, or the whole, of the system of the right side of the heart, may, under certain circumstances, give rise to petechiæ, and whatever impedes the action of the heart, as plethora, congestions, &c., or lessens its power, or diminishes its muscular tone, as scurvy, may produce this engorgement of the veins. Hence we see petechiæ with symptoms of visceral congestion, with fever, full hard pulse, &c., with symptoms of general engorgement of the veins, as in congestive fever, with prostration of strength, small pulse, and other indications of a smothered action of the heart, and with symptoms of atony, or weakened action of the heart, produced by the usual causes of scurvy.

Though hemorrhagic petechiæ do often occur in typhus, no one, I believe, has ever thought of identifying purpura hæmorrhagica with typhus. But would it be more absurd than to attribute it to scurvy? Every one must admit the practical importance of correct notions of the nature and character of diseases, and a proper nosological arrangement of them. Much mischief may be done by placing purpura hæmorrhagica among the exanthemata, and associating it, in the mind of the young practitioner, with a class of diseases that observe a regular course, and often require no interference; but by confounding it with scurvy, he may hurry his patient to an untimely grave, by trusting to means calculated to strengthen and invigorate the constitution.

Purpura hæmorrhagica, occurring as it often does in persons neither greatly debilitated nor exposed to any of the

* Pathological Observations, part 1.

causes of scurvy or typhus, appears to depend upon a peculiar condition of the vascular system, which perhaps may be compared to that which occasions dropsy; for, like dropsy, we see it attacking the strong and the weak, and existing, with increased action of the heart in the one, and with diminished in the other. Water is poured out by the serous textures in one, and a fluid strongly resembling blood is effused from the mucous textures in the other; in fatal cases, both are met with in the same individual. General uneasiness, depression of spirits, foul tongue, confined bowels, high colored and scanty urine, &c. are common to both. Dropsy often results from hepatic, cardiac, and other affections; from scarlatina, measles, and most of the fevers; so hæmorrhagic purpura may be developed in many diseases, or arise from the engorgement of particular organs. Cazenave says—“There are found, in fact, evident traces of congestion and effusion, but not of inflammation, in the intestines.”* The pathology of purpura hæmorrhagica is said to be enveloped in obscurity: Is that of dropsy perfectly understood? A satisfactory explanation of the latter might, perhaps, go far to elucidate the former.

Of the remote causes of purpura hæmorrhagica, very little is known, as it is developed in the most opposite states of the system. The robust and feeble, the youthful and aged, the voluptuous rich and famished poor, have alike been its victims. Nor do any particular trades or occupations seem to occasion a predisposition to it. Bateman says†—“It occurs at every period of life, and in both sexes, but most frequently in women, and in boys before the age of puberty, particularly in those who are of a delicate habit, who live in close and crowded situations, and on poor diet, &c.” But he continues—“The disease, however, appears occasionally, and in its severest and fatal form, where none of these circumstances exist, for instance, in young persons living in the country, and previously enjoying good health, with all the necessaries and comforts of life. This tends greatly to obscure the pathology of the disease, for it not only renders the operation of the alleged causes extremely questionable, but it seems to establish an essential difference in the origin and nature of the disorder, from that of scurvy.” Other writers are equally at a loss respecting the remote causes. The immediate cause has been said to be a want of tone in the capillaries, permitting the blood to escape upon the different surfaces, and the advocates for the humoral pathology have

* Cazenave on Cut. Dis. p. 378.

† Synopsis, p. 105.

attributed it to a change in the blood favorable to exudation, which change they argue is proved by the fluidity of the blood after death. Cazenave says*—"In many persons who were examined after death at the hospital of St. Louis, the blood was found in a state of remarkable fluidity, even in the tissues where it had been effused in considerable quantities." But this proves but little, when we recollect the changes that undoubtedly take place in the fluids, in articulo mortis, and immediately after death. The *Medico-Chirurgical Review*, for 1829, p. 185, contains a number of interesting cases occurring in St. George's hospital, in which the blood was found after death preternaturally fluid, which go far to establish the fact, that no just inferences, respecting the disease or cause of death, can be drawn from the post mortem appearances of the blood. Some have supposed the immediate cause to be an inflammatory action, and Dr. Parry, of Bath, has considered it to be "an over distention of certain blood vessels, arising probably from their want of tone, or the due contraction of their muscular fibres."†

That congestion or engorgement of the whole, or of a part of the venous system, is the immediate cause of purpura hæmorrhagica, is no new doctrine: many of the English pathologists are of this opinion; and upon this principle most of the phenomena of this curious malady may, I believe, be explained. The following are some of the facts that go to establish it. The blue appearance of the mouth and tongue, M. Biett has "observed in a patient in whom this disease had suddenly developed itself; the tongue of double its natural size, and having a deep blue color, evidently depending on a congestion of venous blood: the lips presented the same hue, as did also several parts of the face:"‡ the deep black color of the blood when drawn, indicating an accumulation or retarded circulation in the veins, as noticed in many cases: the uneasiness, and great depression of strength without actual debility, derangement of all the abdominal functions, and fulness and tenderness of the hypochondria, indicating congestion in the portal system: the blue or purple tint of the abdominal viscera, noticed on dissection, and the effusions of blood and bloody serum within the cranium, chest, abdomen, in a word, into all the organs, whether parenchymatous or membranous.

That evident marks of congestion should remain after death, in all cases, is not probable, as it is often preceded by great exhaustion; and the very effusions which occasion-

* Page 374. † *Ed. Med. and Surg. Jour.* vol. 5. ‡ Cazenave, p. 374.

ally act as its immediate cause would relieve the distended vessels.

“The treatment,” says Willan, “is simple, and may be comprized in a few words. It is proper to recommend a generous diet, the use of wine, Peruvian bark, &c.”* This is in unison with his opinion of its identity with scurvy, as before quoted. Bateman admits that bloodletting and cathartics may be sometimes admissible, but confines their use to cases attended by marked febrile excitement. He says—“When it is accompanied with a white and loaded tongue, a quick, and somewhat sharp, though small, pulse, occasional chills and heats, and other symptoms of feverishness, however moderate; and if, at the same time, there are fixed internal pains, a dry cough, &c., then the administration of tonic medicines, particularly of wine, cinchona, and other warmer tonics, will be found inefficacious, if not decidedly injurious.” In such cases he advises purgatives, and goes on to say—“If the pains are severe and fixed, and if the marks of febrile irritation are considerable, and the spontaneous hæmorrhage not profuse, local or general bloodletting may doubtless be employed with great benefit, especially in robust adults.”† Cazenave declares the treatment to be “enviored with many difficulties, and that the most opposite plans of cure have been proposed. The general debility with which it is accompanied, and its asthenic state, have appeared to exclusively indicate the use of active tonics, nourishing diet, wine, and all means capable of restoring and strengthening the constitution: but in many cases, their employment, far from producing the expected amelioration, has on the contrary augmented the evil.”‡ Of purgatives he says—“The epigastric pains, and those felt in the hypochondria, or any other region of the abdomen, either with or without tension of the parts, the derangement observed in the digestive functions, and the complete absence of all fever, all prove that much reliance ought to be placed on them.§ Dissection confirms this opinion: there are found, in fact, evident traces of congestion and effusion, but not of inflammation, in the intestines.” After admitting the occasional necessity of bloodletting, he says§—“Nevertheless it must be stated from positive facts, that bloodletting, either general or local, should always be employed with caution, as well from the additional feebleness it occasions, as from the difficulty of arresting the flow of blood. The only cases in which it should be used,

* Reports on the Dis. of Lond. 1797.

† Synopsis, p. 119.

‡ On Cut. Dis. p. 377.

§ Page 378.

are those in which the disease is developed in strong and robust adults, in whom evident signs of inflammation are present, such as violent local pains, acceleration of the pulse, heat of skin, and when the morbid hemorrhages are slight." M. Biett has found that the most advantageous treatment consisted in the use of acidulated drinks, and laxatives, &c. Now I would ask, what inference will the inexperienced practitioner draw from all these quotations? Simply this; that the treatment is to be regulated by the symptoms, and that he is never to bleed except when unequivocal inflammatory action exists. When the skin is cool, the pulse feeble, the strength depressed, and hemorrhage considerable, though early in the complaint, he will think he cannot go wrong in prescribing for symptoms, and unless he takes a hint from the valuable remarks of Cazenave on purgatives, which I have just quoted, he will order tonics and astringents, and the chances are, his patient dies. If there is danger in prescribing for the names of diseases, I am convinced that in this, as well as the congestive form of fever, there is quite as much in prescribing for symptoms.

In 1822, a young lady, aged fifteen, who had always enjoyed good health, without being exposed to any apparent cause of disease, was attacked with purpura hæmorrhagica. A physician of my acquaintance attended her, and, guided by what he considered indications of extreme debility, made trial of a great variety of tonics and astringents; nor was he entirely convinced of their inefficacy, till the unfortunate patient, who had excited the deepest interest in the neighborhood, sank under the disease.

But as well authenticated facts constitute the only basis on which a safe and judicious practice can be founded, I have selected the following cases, (the more valuable for coming from different sources,) which I have abridged as much as possible, without intentionally omitting any important particulars, thinking that by bringing them into one view, they might not be altogether unacceptable, particularly to the junior members of the profession.

CASE I.* [By Dr. Parry, of Bath, to whom I believe we are indebted for some of the earliest hints on the proper treatment of purpura.] This was a gentleman rather addicted to free living, who was suffering from considerable fever, and inflammation of the testicle, which ended in hydrocele. "The pulse," says the doctor, "being very hard and strong, the heat great, and the urine high colored, Mr. Atwood was ex-

* Ed. Med. and Surg. Jour. 1809.

tremely desirous of taking away blood, but was deterred by numerous logwood colored flat spots which appeared on the skin, of different forms and sizes, some small, others as large as a silver penny. These spots, as in the former case, were evidently ecchymoses, or extravasations of blood, the disposition to which was so great, that if you pressed the skin with your finger, a deep purple vibex of a corresponding shape exhibited itself in a few hours on the part so touched." So great was the dread of bleeding, notwithstanding the full hard pulse, that it was agreed that "it should be performed at first moderately." The complaint immediately yielded to it.

CASE II.* [Dr. Harty, of Dublin.] An unmarried female servant, about 30 years of age, rather corpulent, but previously healthy. All the characteristic symptoms of *purpura hæmorrhagica* were fully developed. Guided by the authority of Dr. Willan, she was treated with nourishing diet and tonics; but the disease made progress, and "after suffering immense losses of blood from every organ successively, she gradually sunk." "After such a result," says Dr. H., "so different from that which Dr. Willan's history of the disease had led me to expect, you may conceive my alarm at meeting a second case under circumstances still more unfavorable."

CASE III. "This was a delicate woman about the same age, worn down by frequent parturition, poor diet, &c. The disease set in with a severe attack of cholera, and in two days after, petechiæ appeared, quickly followed by hemorrhage from the mouth, nose, and stomach. Convinced of the inefficacy of mere tonics in bad cases, and forcibly impressed with the occurrence of cholera previous to the appearance of petechiæ, and by a recollection of the remarkable pain in the epigastric regions which so generally precedes them, I determined in this case to direct my whole attention to the abdominal viscera, and accordingly prescribed a brisk purgative of calomel." The effect was such as to encourage its repetition, and in less than ten days the patient recovered.

CASE IV. "My next was also a case of the hemorrhagic kind. A boy, about three years old, on whose face and body large purple spots appeared, when three weeks convalescent from scarlatina. There was occasional, though not profuse, hemorrhage from the nose, gums, and fauces; calomel and jalap were liberally administered for four successive nights. The feces were black like pitch, and highly offensive. After each purgative there was evident improvement. The feces

* Ed. Med. and Surg. Jour. 1813.

assumed a more healthy appearance, and by the sixth day a single spot was not to be traced on the whole body."

CASE V.* [D. E. Gairdner.] A boy six years old, of a weak and strumous habit, after some slight premonitory symptoms, presented, May 1st, the following appearances. Purpurine spots on the surface generally, and tongue; oozing of blood from the gums, nose, &c.; breath offensive; abdomen tumid, and hypochondria tender to touch; bowels confined; urine high colored and turbid—a saline cath.; diluted sulph. acid; bath at 80°. May 2d—pulse 100 and wiry; hemorrhagic symptoms increased—bled $\frac{3}{4}$ x.; bath; acid sul.; calomel and jalap aa. grs. iij. every three hours. May 3d—something better. May 4th—pulse 124; symptoms not so favorable—two or three ounces of blood allowed to flow from the puncture in the vein, which was not yet closed. May 5th—pulse 102; discharges from bowels black and offensive—ol. ricini. It was now thought advisable to give mild tonics, and on the 14th he was well. Some remarks of Dr. G. on the blood follow, and an analysis of the urine, by Mr. Murray. Coagulated at 180°.

CASE VI.† [Dr. Belcher.] Child between three and four years old. Pulse 110, soft; lips pale; surface cool; brown fur, and purple spots on the tongue; hemorrhages from various parts; skin covered with petechiæ. The appearances of debility, and the prejudice of friends, induced Dr. B. to give wine, negus, &c., which greatly aggravated all the symptoms. The pulse raised to 140; the skin became hot; grinding of teeth, and convulsive movements. He now prescribed warm bath, cal. and rhei., and turpentine nema., which produced copious evacuations, and entirely removed the complaint.

CASE VII.‡ [Dr. Fairbairn.] This was a bookbinder, æt. 24, of correct habits and good constitution. On the 18th Nov. Dr. F. found him as follows: petechial spots of various shades on the extremities and trunk, mouth, and fauces; tongue covered with dark fur; urine of a grumous appearance; pulse 110, firm and sharp; surface hot; bowels relaxed; difficult breathing and pain in the side—bled 26 oz. with some relief; blood not buffy; coagulum soft—acid sulph. dilut. 19th—oozing of blood continues, and he is feverish—bled 18 oz., blood of the same appearance; a dose of salts, which produced a loose, offensive stool. 20th—symptoms of determination of blood to the head—bled 20 oz.—died on the

* Ed. Med. Chir. Trans. v. 1. p. 671. † Med. Chir. Rev. 1827, p. 61.

‡ Med. and Phys. Jour. 1825.

21st. Dissection—petechiæ as before death; cellular and muscular textures on the back and chest injected with blood, and emphysematous; thorax contained a pound of dark viscid fluid resembling blood; parts within the chest generally injected with bloody fluid; some petechiæ on the stomach and bowels; and the floating viscera of the abdomen of a dark leaden color.

CASE VIII. [Hospital St. Louis.] A man, aged 27, of good constitution, entered St. Louis with epistaxis and petechiæ. Had committed an excess in drinking several days previous, and has been complaining ever since. July 5th—blood dripped slowly from nose and gums; tonsils, palate, and fauces of a blue color; face pale; no great weakness complained of. M. Richerand pronounced the disease “un scorbut tres grave,” and ordered wine. In a few hours the patient began to complain of headache, which soon became violent; pulse small and concentrated; and hemorrhages from several parts—cold to the head, and sinapisms to the feet. All the symptoms increased in severity; patient became senseless; great difficulty of breathing; limbs paralyzed. July 6th, five o'clock in the morning—bled eight ounces and expired in a few minutes. Dissection—blood everywhere effused within the cranium, and vessels of the pia mater distended with black blood; effusions in the chest; lungs gorged, and vena cava contained fluid blood; tonsils of a violet color; internal surface of the stomach of a purple tint; black fluid in the stomach and duodenum, and ecchymoses on the peritoneum and intestines.

CASE IX. July 17, 1827, I was consulted by Mrs. Johnson, the wife of a respectable farmer, aged 40, mother of several children, and who has generally enjoyed good health. For a few days past she had complained of depression of spirits, sense of weakness, loss of appetite, and general uneasiness, without any fixed pain. The trunk and extremities are covered with spots resembling stains, some of a light red, others of a bright purple color, and of a circular form, from one line to half an inch in diameter. The minutest examination discovers no elevation of the cuticle. Similar spots on the roof of the mouth, and several large irregularly shaped ecchymoses of a greenish hue, like bruises on the legs and arms; oozing of blood from the mouth, nose, and ears; pulse 100, small and soft; skin cool; loss of appetite; tongue coated with a brown fur; gums spongy; breath offensive; bowels confined. I advised her to lose blood, and take *ol. ricini.* and *ol. terebinth. aa.* ʒss. every fourth hour till the bowels were freely moved. July 22d—the person

commissioned to bleed her had taken 6 oz. from the arm on the 18th, and about the same quantity on the 19th, with difficulty, as the blood, which was very black and thick, flowed slowly. The medicine had been taken several times, but with slight effect. Symptoms on the 22d—petechiæ more numerous, in other respects as on the 17th; hæmorrhage from the mouth and uterus; pulse quick and hard; loathing of food; tongue heavily coated, dark, and studded with small elevations of the size of split peas, which bled; breath excessively offensive; urine scanty and high colored; complains of languor, great depression of spirits, and uneasiness, but no fixed pain—venesect. 18 oz., which occasioned some faintness; blood black when first drawn, coagulated, and slightly buffy; ol. ricini. and ol. terebinth. aa. ζ ss. every third hour, which soon produced copious fetid and black evacuations. July 23d—feels herself entirely relieved, and thinks she is stronger than yesterday; spots disappearing and turning greenish; hæmorrhages ceased; tongue becoming clean, and some appetite. In a few days she was perfectly well, and so far as I have been able to learn, has had no attack of a similar nature since.

CASE X. April 10, 1828, S. Wheeler, a robust young man of 21, after severe labor with his feet wet, complained of loss of appetite, uneasiness, and slight feverishness. The second or third day, spots of a bright red appeared on the legs, but as the symptoms were not urgent, I merely advised epsom salts and a low diet. On the 11th he was worse—red spots covered his thighs, while those on the legs had become purple; blood oozed from the nose; pulse 80, full, and elastic; tongue coated; bowels torpid, &c.—I drew 16 ounces of blood from the arm, and gave calomel and jalap, which acted thoroughly on the bowels, and every appearance of disease speedily vanished. He has had no return of it since.

From the foregoing facts it may be inferred that bloodletting may be employed in very many cases, not only with safety but immense advantage; at the same time there are probably but very few cases which will yield to it alone. It is calculated to relieve at once the congestion which I have attempted to prove to be the immediate cause of purpura hæmorrhagica, and bring the system into a condition to be advantageously acted on by a no less important remedy, cathartics. These, it requires no great stretch of the imagination to suppose, would have but little good effect upon organs in a state of engorgement, and experience proves, that in dropsy and many other diseases, the secretions are but slightly influenced by them, unless preceded by vene-

section. The actual strength of the patient appears to be the best guide in the use of the lancet. The age, length of the complaint, and above all the pulse, should not govern us. In the case of Mrs. Johnson, the pulse was so entirely compressible as not to indicate the least morbid excitement, and guided by it I should not have bled; yet after two small bleedings it became hard. Much has been written by Rush, Armstrong, and others, on the difference between the apparent debility so often noticed in the first stage of many diseases which they term depression and real debility or exhaustion. This I believe to be strictly applicable to *purpura hæmorrhagica*. Mrs. J. declared herself to be stronger after losing 18 ounces of blood, and abundant alvine evacuations, than before, and every one who has seen much of fevers, has heard his patients say they were entirely relieved from the most dreadful sense of weakness, after a brisk cathartic. There are not unfrequently cases, where the pulse is full and hard, and the temperature of the skin elevated; in these, of course, there can be no hesitation in using the lancet; but we should not be deceived by a soft feeble pulse, cool skin, and great apparent debility, for these are symptoms which indicate the most dangerous congestion, and imperiously demand it. Prudence forbids the taking a large quantity at first, but if it coagulates firmly, or is sisy, if the patient feels no increase of weakness, if the pulse becomes fuller, or does not lose any thing in force, we may be sure it is not prejudicial. Bleeding too copiously will not only fail of benefiting our patient, but, by relaxing the muscular power, may give rise to, or encourage, those effusions, generally the immediate cause of death, and always found on dissection. In Mr. Fairbairn's case, the effusions discovered in almost every texture and organ of the body, were probably occasioned in some measure by the copious bloodletting, though the evident pectoral derangement manifested at the very commencement of the complaint renders it doubtful whether his patient would have been benefited by any treatment. It must strike the most inattentive observer, that the bleeding was carried too far, (60 oz. of blood in three days,) but if we are astonished at his pertinacity in the use of the lancet, (20 oz. the last time,) we are not less so at the neglect of other remedies. In what other complaint, with such indubitable coincidence of derangement of all the abdominal functions, as offensive breath, foul tongue, fetid and loose stools, urine as described, &c., would he have contented himself with a dose of salts? Do we attempt to cure sthenic dropsy with the lancet alone? or should we expect any thing but death

from a too free use of it in congestive fever, where its frequent application is so preeminently serviceable? The fatal termination seemed to be hastened by the loss of a few ounces of blood in Richerand's case, though doubtless at the time the brain had suffered too much for life to be long continued: but the case proves incontestibly the danger of prescribing for the names of diseases. A robust man of 27, no way exposed to the causes of scurvy, has purpurine spots and hæmorrhage, after an excess in drinking; his strength is but little affected, and he does not complain much, yet is declared to have scurvy by this celebrated physiologist, and treated accordingly. It would be exceedingly illiberal and ungenerous to say he might have been saved by a prudent use of the lancet, and free purging, but facts do justify the statement that cases, to all appearance similar, have been cured by these means.

Great discredit may be brought on a highly valuable remedy by an unwarranted use of it, and the individual who applies it without distinguishing between terms and circumstances, not only risks the lives of his patients, but prevents its due employment by others. On no subject perhaps, has a greater diversity of opinions existed, than that of bleeding in typhus fever. At different periods it has had its warm advocates and violent opponents: by one it has been considered as hastening the debility that so strongly marks the last stage, while by another it has been extolled as most effectually relieving the excitement which so rapidly exhausts the powers of the animal machine, or in other words, that occasions the debility; but in the congestive form, its great utility was demonstrated by Sydenham, and very few I believe can deny its efficacy, since the luminous and convincing writings of Armstrong.

It is clear that, in this malady, purgatives hold an equally high rank with the lancet. In most of the milder cases, where there is no great fever, or symptom of alarming congestion, I believe them, if judiciously used, quite competent to effect a cure. In almost every severe case, the disease has not given way, till abundant fetid, black, or filthy stools have been procured. Nor can these be attributed, as they often are, to mercury. Mrs. Johnson took not a particle of any medicine except *ol. ricini.* and *ol. terebinth.*, and her evacuations were truly astonishing, both in quantity and color. This fact is an important evidence of the supposed cause, congestion. Those which act most decidedly on the secreting apparatus are doubtless the most eligible, such as calomel and jalap. *Spt. terebinth.* is spoken highly of by many,

ERRATA IN DR. AVERY'S PAPER.

Page 263,	5th line	from bottom,	for "such,"	read "sea."
" 270,	15th	" "	" " "nema,"	read "enema."
" 273,	5th	" "	" " "coincidence,"	read "evidence."
" 274,	2d	" "	top, read	" where its application is frequently so," &c.
" " 19th	" "	" "	" for "terms "	read "times."
" " 9th	" "	" "	bottom, for	"filthy," read "pitchy."
" 275,	27th	" "	top, for	"Richard," read "Richerand."



though probably possessing no qualities which entitle it to a decided preference.

Convinced as I am of the sanative powers of the two remedies just spoken of, I am far from denying the occasional utility of wine and astringents. The hemorrhage may be so abundant at first as to unload the vessels. The disease has then spent its force, and the strength should be husbanded with wine and gentle astringents. A case of this sort occurred to an acquaintance of mine, on whose statement I can rely. A middle aged man, of full habit, and inclined to be corpulent, after exposure to excessive heat, and violent exercise, was attacked in the night with violent hemorrhage, from several parts of the body. In the morning, the bed on which he lay was bathed with blood; his skin was covered with petechiæ, and cold; his features blanched, and his pulse scarcely perceptible at the wrist. Wine and water with acid sulph. dilut. were administered, and he gradually recovered.

After the disease has been principally subdued by evacuants, the powers of the system may be slow in rallying, and the cautious use of tonics is then admissible. Of this kind are Mr. Gardiner's case, two reported by Dr. Hotchkins, (Middlesex Hospital,) and some others. But the greatest caution is necessary in commencing with tonics, as they may, if given prematurely, occasion fatal congestions in the organs gorged with blood, by rousing the heart to send them that little, which is necessary to destroy their integrity. How soon did Richards's patient show the effects of compressed brain after taking his wine?

It is evident that prudence and discrimination are indispensable in treating *purpura hæmorrhagica*: but when are they not requisite in the medical practitioner?

We are told that cases have proved fatal under every variety of treatment. I should like to know of what severe disease the same remark cannot with truth be made? Do we always cure pneumonia, or inflammation of any important organ? In *purpura hæmorrhagica*, fatal effusions may take place so early as to render our best efforts abortive. But that prudent bloodletting and purgatives, with the occasional assistance of tonics and stimulants, will as often succeed in this disease, as the lancet and antimony in inflammation of the lungs, I have very little doubt.

The hygienic treatment requires no comment, as it will suggest itself to every reasoning mind. In the foregoing remarks, I have had frequent occasions to refer to Cazenave on cutaneous diseases, a work not made up on the opinions of

an individual, but an expose of the doctrines and practice of an establishment for cutaneous diseases, perhaps in many respects unrivalled in the world, and the fruit of the immense labors and vast experience of Alibert and Biett, under whose inspection it has been published.

ART. III. *Observations on Cholera Infantum.* By JOHN BAXTER, M. D. Read before the New York Medico-Chirurgical Society.

IT is not a little astonishing that a disease so fatal as cholera infantum, sweeping off from among us so large a proportion of the progeny of the country, should attract so little attention from our profession in respect to its causes and effects. Thousands of infants are annually consigned to the grave between the Hudson and Mississippi, by this direful malady—thousands of parents have their feelings annually torn by this complaint. That it should not attract so much attention in Europe, is not surprizing, since in that quarter of the globe it scarcely appears, although we should have supposed that an article upon it would have been found in the *Dictionnaire des Sciences Medicales*; it has, however, been omitted in that splendid work, as well as in Dr. Parr's *Medical Dictionary*. The autopsic examination* of this, as of all diseases, is indeed too much neglected in this country. We seem to have come to the conclusion that we know enough already about disease and its effects upon the body, and that no more research is necessary into the hidden recesses of the human system—that human prejudices are to be yielded to instead of being combatted, and therefore, with a listless apathy, unworthy the high situation in which our profession has placed us, and in neglect of the high duties it calls upon us to perform, in guarding against disease as well as curing it, we no longer search the body for the cause and effect of diseases, and of our remedies.

While on this subject, in order to show the sincerity of our devotedness to our profession, to promote the good of our fellow beings, and to do away, as much as the influence of our example may be effectual, the unwarrantable prejudices of the people concerning the examination of bodies after death, I

* "It is, then," says Dr. Horner, "a remarkable fact, that, from such an immense store of information, there is not one dissection a year reported to the medical public." He says he can find but one reported in detail for the last twenty years in the *American Journals*.

propose to my associates, that we enter into an agreement among ourselves, that our bodies shall be examined after death, previous to interment, and that we consider it a duty due each other, for the survivors to attend and see that an autopsic examination of those who die first, be duly and faithfully performed. By this means we shall show to the people that we possess none of that dread of the operation which they so often entertain.

To return to the subject to which this paper is devoted. I do not intend, now, to examine minutely all the particulars of this disease. My object is to relate two cases which came under my observation this season, with their post mortem examination, and the treatment that has hitherto been the most successful in my hands, with the hope that more information may be elicited upon this dire affliction.

In May, 1827, I was called to the child of Mr. How, aged two years, who had been an invalid for ten months, being taken in the summer of 1826, with cholera infantum, from which it had never recovered. It was now afflicted with pain frequently occurring in the abdomen, attended with loose unhealthy discharges, differing at different times: it had a morbid appetite, very voracious at times, and frequently vomited: it was feeble and unreconciled, and with difficulty would consent to leave its cradle without being in its mother's arms: it had distress in breathing, with severe cough, which was much increased at times, with frequent febrile exacerbations. The stools were often very offensive, and mixed with blood. Purgings with the submuriate hydr. and castor oil was used, with occasional mitigation, but no removal of symptoms—opium in the form of Dover's powder and morphia occasionally mitigated them—removal to the country also had a good effect for a short time, and other medicines were administered without procuring any relief. Worms had been suggested as the cause of the distressing disease, but the medicines administered in compliance with the suggestion, procured no relief or discharge of worms. The symptoms, with occasional suspension, continued to increase in severity and duration, especially the distress in breathing and coughing, which motion aggravated often to a great degree, until it became the wish, I believe, of the parents, it certainly was my own, that the child would die. Finally, in March, 1829, a considerable alteration took place—anasarca of the face and body came on—soreness of the glands of the throat and neck, and, also, of left side of thorax—loss of appetite—swelling of the abdomen and in the left region of the liver. On the twenty-fourth, vomiting of purulent matter—daily hectic

having been established for some time; twenty-fifth, difficulty of respiration increased, and death occurred on the twenty-sixth.

The following were the autopsic appearances. The body much emaciated—the feet anasarcaous. The stomach was first examined, and patches of enlarged bloodvessels were disseminated over its whole surface, especially at its large end; the inflammation appeared of an erythematous character in the villous coat.

The small intestines were also found sprinkled with inflammatory appearances, in red patches, and, at intervals of about three inches, very regularly throughout the intestines, were ulcerations with hard raised edges, extending through the mucous membrane, from the size of a sixpenny piece to that of a shilling; probably more than a hundred existed. Both the stomach and bowels contained nothing but a slimy mucus of a light and reddish color, with but little bilious matter. The inflammatory matter here was more of a follicular character. The child had taken nothing for five days.

The mesenteric glands were increased in size through the whole length of the gland; some were larger than a bean. There was no suppuration in any that were opened.

The omentum was very thin and delicate; no adipose substance was contained in it.

The liver was enlarged, but no diseased appearance was discovered through it.

The thorax was next examined. The heart was found in a healthy state; but the lungs were both indurated and a vast number of tubercles dispersed throughout both; they were white and hard; some were suppurated and very numerous, from the size of the head of a small pin to that of a small bean.

The left lung was adherent to the pleura all around.

The brain was not examined.

The examination of this patient after death very satisfactorily explains the symptoms, and accounts for its origin, which there is every reason to believe was an attack of cholera infantum having become chronic, which, degenerating into ulcerations, perhaps of the mucous follicles, elicited, as a secondary sympathetic affection, tubercular phthisis in the lungs, both diseases continuing until their termination by death.

The state of the lungs fully accounts for those distressing paroxysms of coughing, which came upon the child frequently every day, and which lasted more than a year: if seized by

them, when awake, he would catch upon anything to hold by, or throw himself upon the floor until the paroxysm was over, during which the face became turgid and discolored as in whooping cough. Tubercular phthisis in so young a child is of rare occurrence. The continued and frequent exacerbations of the symptoms of cholera are fully explained by the ulcerations.

Another case I shall relate, is that of a child of F. W., aged eight months, who was taken the last of July with vomiting, purging green stools; no physician was immediately called; there being much pain, paregoric was given, with a dose of *ol. ricini*, and some domestic remedies: the disease not yielding, in a few days a physician was called for; *sub. mur. hydrarg.* was administered, and the disease mitigated for a few days; a relapse occurred on the 10th August, with dark discharges, febrile paroxysms, and much pain, which did not yield to any remedies—warm bath, cathartics, or paregoric. It died on the twelfth. I did not see it during its sickness, being out of town when it was taken.

I examined it six hours after death.

The body was plump, and well supplied with adipose substance.

The thorax was first opened, where everything appeared in a healthy state.

The stomach being next examined, was found to contain a quantity of dark brown fluid, mixed with mucus, not unlike the coffee ground appearance. The mucous membrane of the stomach was found studded with red spots, about as large as a sixpence, consisting of blood vessels, proceeding from a circumference to a centre of each spot, mostly at the larger end of the stomach. The same was traced into the smaller intestines, but not so numerous. A yellowish mucous liquid was found throughout the intestines. No ulceration existed.

The liver was found in a healthy state, and not larger than is usual in children of that age. The other viscera were also healthy.

The appearance, on dissection, of the first case, shows the fallacy of the proposition which asserts that disease cannot exist in two different tissues at the same time, or that a tissue being diseased, any other tissue becoming so, the tissue first diseased becomes healthy.

In the second case, I am inclined to think that the disease was follicular, not villous, although the examination was not sufficiently particular to speak positively. I regret that I did not retain the stomach and a portion of the intestines.

It has not been fully determined among practitioners, where the seat of this disease is located, and what is its nature, although there are many who hold the opinion of its being seated in the mucous membrane of the stomach and bowels, and that it is of an inflammatory nature, in fact, a pure gastro enteritis. But others there are, who consider the liver alone as the organ affected, and place it among bilious fevers, a term, as one of science, altogether indefinite and unsatisfactory, and one not founded on fact. Some have seated it in the lower bowels, altogether, as a dysentery, while others consider it merely as an irritation of the stomach, unaccompanied by inflammation. Every one, of course, will form his opinion according to the evidence exhibited to his mind. I cannot myself doubt that inflammation of the mucous membrane of the whole chylopoietic viscera constitutes the disease, although I cannot positively assert with Dr. Horner, that it is not altogether rather of a follicular than an erythmoid character, "that is, rather a disease of innumerable mucous glands, or follicles, extending from one end to the other of the alimentary canal, than a common vesicular or erythmoid inflammation."

From the connexion which the mucous membrane of the digestive organs has with the whole animal economy, and from the importance which the stomach enjoys in the system, it was natural to locate the source of the primary irritations in these parts; this the reformer of the French school has done, not only as regards that class of diseases which are termed fevers, but with respect to many others. Thus irritation of the mucous membranes of the stomach and intestinal canal, or gastro enteritis, gives rise to variola and yellow fever.

Brown, as well as Pinel, classed all diseases of the stomach as asthenic, following Hoffman, Cullen, and others. Pinel only considers the higher degrees of gastritis, such as are attended with those symptoms which accompany the administration of corrosive poisons. Broussais has taken a more extended view of these irritations; whether more correctly, remains for those who examine to judge; every one must form an opinion for himself.

There are certain symptoms which are common to certain diseases, by which they are classed together. In fevers we have chills, lassitude, headache, dryness of skin, with heat and increased pulse, which distinguish them, whether the poison applied be the virus of smallpox, or that of miasma: but these cases, notwithstanding their apparent diversity, and although unknown in their composition, have one identical effect, that of irritating the same viscera and of producing in-

flammation, and this they certainly all do, beginning, according to M. Broussais, in the intestinal canal; and it is by fixing the attention upon the irritation, and solely upon the irritation of the viscera, when the disease is developed, that these doctrines have made so great a stride in pathology.

By the immediate application of irritants to the canal itself, the irritation and gastro enteritis are produced in fevers.

The sympathy which is exercised between the mucous membranes, and other parts, as the skin, &c., is said to be another; thus heat externally applied, as in hot countries, predisposes to, and is productive of, the fevers of those climates; thus bilious fevers, dysenteries, choleras prevail there.

But how, says M. Miquel, can the same affection, having the same seat, cause diseases so different, as are smallpox and measles, scarlatina and syphilis? and why does gastritis, which has passed through all the degrees to produce death, develop in its course neither smallpox, scarlatina, nor yellow fever? And if there be nothing specific in these diseases, why does the inoculation of the variolous or syphilitic virus produce only variola or syphilis? why are the characters of endemics and epidemics different according to places? and if all arise from gastro enteritis, why does not quinine cure syphilis and smallpox, as well as intermittent fever? These very ingenious questions show, however, a wilful misinterpretation, or unfortunate misunderstanding, of the doctrines intended to be taught.

To the first question I will reply, that smallpox, measles, &c. are distinct and separate poisons, all producing irritations of different degrees of intensity, but identical in their nature, and it is these irritations that we have to do with in practice, and to conquer. With the additional specific irritation or action superadded to them, we cannot contend, for we know nothing of their essence. By an antiphlogistic course of treatment in smallpox, we seek to lower the high excitement, and modify the extreme action and irritation of the system; but we do not expect to cut short the disease, or destroy that action by which the contagious virus is generated. The identic irritations fixed upon the bowels may pass through all the degrees of excitement, without producing other essential diseases, because their specificity does not depend upon the intensity of action, but upon the poison first applied. For the same reasons epidemics and endemics differ according to their places, because the circumstances of the location, by producing poisonous miasma of different degrees of strength, produce gastro enteritis of different degrees of intensity, and so far as relates to the sympathies of irrita-

tion, excitement, and fever, these gastro enterites are identical with smallpox, measles, &c.

With regard to syphilis, the action of irritation is of less account than the specific action; here the specific action left to itself is sure to destroy the patient, but the irritation is seldom raised to so great extent. The former does not run through its course as does smallpox, &c., and then cease; but continues until the animal is destroyed, unless a superior irritation, by revulsion, is excited to supersede it, the means of exciting which, we fortunately possess in mercury.

In the question why quinine does not cure smallpox as well as intermittent fever, since both are gastro enteritis, it is astonishing that it should have escaped M. Miquel, that quinine does not cure intermittent fever. We all know that quinine given during the paroxysm of an intermittent, is sure to increase the disease, but given in the intervals, will prevent its recurrence. This opportunity does not offer in smallpox; no intermission offers as in intermittents, so as to allow us to take possession of the system and hold it, by producing an excitement with quinine.

Gastro enteritis, in a large number of cases, is said to originate in inflammation of various organs, and to implicate other organs consecutively, thus spreading through the system. Inflammations of the skin exert, no doubt, an influence on the intestinal tube, which is also affected by those of the brain and kidneys, and these are also often produced by the former. Chronic phlegmasiæ, especially in their latter stages, are observed to act on the canal, producing chronic affection, running into ulceration, whence arise hectic fever and diarrhoea. Wounds and surgical operations, suppression of established evacuations, excessive fatigue and exhaustion, long study, and other moral causes affecting the brain, pain, and the passions, we all know affect the gastric and intestinal organs, producing indigestion and dyspepsia, with all its distressing symptoms. Cases of these sympathies are by no means scarce or unfrequent. These constitute a chronic gastro enteritis, according to M. Broussais. Cardialgia, gastrodynia, pyrosis, boulimia, usually considered as marks of debility and weakness of the organs of digestion, are with him the symptoms of chronic gastro enteritis in different degrees of intensity. Hypochondria is another effect of the same cause.

But is gastro enteritis, or irritation, to some degree, of the digestive canal, either primary or secondary, the cause of all the diseases which are attributed to it? This, it appears to me, is a question of more importance than any of the others.

The sympathies of this canal with all parts of the system are not doubted. Mr. Abernethy has shown how important its healthy state is in many chronic diseases, and although his practice is somewhat different from the French reformer, the conclusions are not very different.

The removal of irritating substances by purgatives and emetics, in many chronic diseases, and the unloading of the vessels of the mucous coat, is of no small importance; but this the professor of Val de Grace attributes to revulsion by exciting irritation in the line of the canal, and condemns the use of those medicines when irritation to any degree exists there; but every practitioner must be aware of the value of this practice in cases where, according to Broussais, we have reason to expect irritation to some extent. The tartrate of antimony is known to be a powerful irritant, applied either to the skin or stomach and intestines; in large doses, inflammation to a great extent is the consequence, yet given to emesis, how often does it not produce powerful relief in the first stages of fever? In yellow fever we do not apply it, as that is conceded to be a state of too high irritation of the intestinal canal, but in lower degrees of fevers in this country, and in small doses often repeated, do we not find it useful in a large majority of cases? We cannot submit our own observation to the suppositions of a system. But tart. emetic has a sedative effect, also, as we see in the relaxation of every voluntary muscle, when taken to emesis, at the same time that it is stimulating the muscular fibre of the stomach to the action of vomiting; these extraordinary effects have never yet been reconciled by any system, nor accounted for upon any physiological principle. But do we not see that a drop of hot water left upon the skin produces redness and swelling, which immediately subsides and leaves the skin in its healthy state, while a larger quantity and hotter produces a permanent inflammation, blisters, gangrene, and sloughs, while pain or fainting is produced by affecting the nervous and circulatory organs sympathetically? thus while one tissue is altered by increasing its action, other tissues are altered by a diminished action. An irritant applied to an irritated surface must increase that irritation, but sometimes this unloads the vessels and relieves inflammation, as by suppuration and vesication; so likewise cathartics stimulate the already irritated mucous membrane of the intestines to unload themselves and produce relief.

Of the cause of cholera infantum nothing determinate has yet been adopted by physicians; for myself I cannot think that one and the same agent is always the exciting cause

of this malady. The mucous membrane of the digestive canal is most susceptible of irritation, and in the infant not accustomed to the various stimuli by which we are surrounded, it necessarily will be liable to be thrown off its equilibrium of healthy action when first exposed to them, and they are most active in the warm seasons, from the effects of heat upon the decomposing materials around us. The violence of the symptoms and the degree of irritation certainly vary through an extended scale, from simple vomiting to the highest grade of yellow fever, so called; and from more than ordinary irritability of the canal, in the infant; this simplest state is ready to be, and probably is, frequently lighted up by unwise and illtimed remedies, into the highest flame of inflammatory excitement. And from my own observation, I should say the most certain guide in our practice in this disease, is rather the avoidance of applications to this membrane, of any kind, except of the very mildest description, and such as will remove what is already remaining in the canal. I cannot but think that the wisdom of practice in this complaint is to restrain the attendants from doing too much. I have long been of opinion that the simple form of the disease is not unfrequently provoked into its highest grade, by the incautious management of nurses and attendance.

The dietetic treatment requires what will be the most soothing to an inflamed surface, and where it is a sucking infant, the parent's milk is undoubtedly the most so; in others, sage, barley water, and boiled crackers, in small quantities, will be the simplest. It must be recollected that the stomach is incompetent to perform the function of digestion, therefore but little food will be required.

In the *methodus medendi*, the *submurias hydrargyri*, and *ol. ricini*, alternately daily, or oftener repeated, until the green and unhealthy discharges take on the customary appearance, have generally been found the most efficient, and amply sufficient to remove the contents of the canal, which is the most we can look for; to attempt more, or to make use of more irritating cathartics, would be but increasing the inflammation existing in the stomach and bowels.

ART. IV. *Case of Ovarian Tumor, successfully extirpated.*

By DAVID L. ROGERS, M. D., of New York, Lecturer on Surgery. With a plate.

IN July last, I was requested by Dr. McCaffry to operate on Mary Gurly, for peritoneal dropsy; after drawing off the water, I observed that the abdomen remained unusually large; upon examination I discovered a large tumor occupying the left iliac region, and extending to the right side. She gave the following history of its origin and growth. Two years since, in her passage from Ireland to this country, after being two weeks at sea, she had a suppression of the catamenia, which was soon followed by a sharp lancinating pain in the left iliac region; previous to which, her health had always been good. On landing, the pain increased, and the abdomen began to swell; first, on the left, and then extending to the right; her stomach became affected, and although unmarried, her friends accused her of being pregnant.

In consequence of this impression, the disease was allowed to proceed without any medical advice, until time had satisfied the friends to the contrary, when a physician was called, who pronounced the disease a dropsy, and recommended her to be tapped.

A large quantity of water was drawn off, but in two months it had reaccumulated, and the operation was repeated five times previous to my seeing her. It is computed that within the two years, eighteen gallons of fluid were drawn off.

I observed in this case what I have remarked in several others: that the fluid discharged differed from the water in common ascites. It is much more mucilaginous; of the consistence of honey; of a milky color, and differs from any other secretion that I am acquainted with. After deliberately examining the tumor, and as far as possible ascertaining its character and connections, I suggested to her the possibility of its being cured by an operation, at the same time stating the great risk of life attending the performance, and the slight chance of her recovery. I likewise requested professor Mott, who was consulted in this case, to make a similar statement. Her good constitution and general health all urged the obligation of making an attempt to save her. After the first suggestion, nothing could alter her determination to forego the chance of relief which even so desperate an operation might afford, and, as she expressed it, "I would rather die than live in my present situation."

It was accordingly determined to perform the operation as soon as the weather would permit. In the mean time she was placed upon a vegetable diet. One week previous to the operation I again drew the water, and directed her to live upon bread and water, to take a saline cathartic every morning, and to lose blood to the amount of twenty ounces on the day previous to the operation. This preparatory treatment was rigidly carried into effect by Dr. McCaffry, and to his care I feel much indebted for the success of the case. On the 14th of September I proceeded to the operation, assisted by professor Mott, Dr. Vaché, and my brother, Dr. J. H. Rogers, in the presence of my pupils. She was laid on a table of convenient height, and with a large scalpel I commenced an incision a little below the ensiform cartilage, carrying it parallel with the *linea alba*, and terminating at the symphysis pubis. The integuments being divided, the dissection was continued through the tendon of the *linea alba* to the peritoneum. This was at first supposed to be much thickened, but by a cautious dissection through a membranous texture to the depth of a quarter of an inch, the water gushed out with considerable force. With a probe pointed bistoury, the opening was enlarged to the full extent of the external incision, and to our surprize we found that a sac was opened which appeared to fill the whole circumference of the abdomen, and at first its attachment appeared commensurate with its size. It lay in connection with the liver, stomach, spleen, and bladder. By pulling up the sac it was found that the adhesions were much less than at first expected. It was determined, therefore, to dissect them from the peritoneum and omentum: some of the adhesions were so slight as to be separated by the finger, others by the handle of a tedious dissection, and in some parts the adhesions of the scalpel, but the greater part required to be separated so close that portions of the peritoneal membrane were removed. These adhesions extended for three or four inches around the umbilicus. [See fig. 1.] After completing this part of the dissection, the tumor was drawn out and supported by an assistant, and the dissection continued; separating it from the ovarian ligament, [see fig. 2,] which required much care, from the large and numerous vessels going to it from this source: the largest was at least the size of a goose quill. After occupying two hours in the operation, this huge mass of disease was safely removed, and laid on the table. The ligatures were all cut close to the knot, and left to absorption. The wound was closed by sutures, dressed with adhesive straps, lint, a compress and a bandage applied

firmly to the abdomen. I place some confidence in the close application of a bandage, as it brings the divided surfaces in contact for the purpose of adhesion, and likewise as an important auxiliary in preventing inflammation. She was then removed to bed; her pulse at this time was feeble, but regular. In the course of the evening, considerable reaction came on, with some heat of skin. The following minutes of the case were kept by my pupil, Mr. Leach.

Sept. 15—slept but little during the night; at 8 A. M. pulse 120, and quite thirsty; considerable pain on coughing, quite easy otherwise; at 7 P. M., slept for two hours during the day; skin dry and hot; restless and in some pain—bled ζ xvj.

16th—she slept better last night; complains of being chilly—applied bottles filled with hot water to her feet; cough troublesome, occasioning some pain; pulse 112—venesect. ζ xvj.

17th—at 8 A. M. pulse 116 and some pain; at 8 P. M. quite comfortable.

18th—slept most of the night; pulse 106, and regular.

19th—pulse 95; very little cough; slept well through the night—dressed the wound, it had mostly healed by the first intention; removed the sutures, and dressed with adhesive straps.

21st—slept well all night; no pain on pressure in any part of the abdomen—dressed the wound, it had entirely healed; let her have chicken broth. From this date she continued to improve in health, without any symptoms requiring notice. In two weeks she was permitted to sit up, and to walk about the room, with directions to return to her usual diet. In six weeks from the day of the operation, she called at my office to inform me that her catamenia had returned, and that her health was perfectly good.

The tumor was composed of a large sac, which contained the fluid drawn off in different operations for tapping. One third of the tumor was solid, containing a fibro-cartelaginous substance. It weighed three and a half pounds.

In offering this case, it may be proper briefly to sum up a history of the operations for diseased *ovaria*. It may assist others in forming an opinion of the relative chance of success in future cases. The removal of these tumors by an operation had its advocates in the last century; but the authority of De Haen and Morgagni was raised against them, as doubtful in their results, and impossible in their execution. The first attempt to remove them by an operation was made

in 1776, by L. Aumonier, surgeon in chief of the Hospital of Rouen, and is reported as a successful case.*

Dr. M'Dowel, of Kentucky, has reported three cases in which he operated successfully for tumors in the abdomen, ovarian, and hydatid. A doubt exists in relation to these cases; and certainly the mode of describing them is calculated to confirm that doubt. We are bound, however, upon the authority of others, to believe them, notwithstanding the improbabilities connected with their details; and it is much to be regretted that a more circumstantial account of these cases has not been given to the profession.†

Professor Smith, of Yale College, has given an interesting case of the successful removal of an ovarian dropsy by an operation. The tumor was small, weighing from two to three ounces, and requiring an incision of three inches in length.‡

In the London Medical Gazette, for 1829, Dr. Hopfer, of Biberback, has reported three cases of extirpation of diseased ovaria, by Carysman. The first was performed in 1819, and proved fatal in thirty-six hours after the operation. The second in 1820. This case was successful, and the woman has since borne children. The third case occurred in the same year, and never recovered from the shock of the operation. Thus, of the three cases, but one recovered.

M. Lizars, in the Edinburgh Journal for October, 1820, relates an attempt to extirpate an ovarian tumor, but unfortunately, on cutting into the abdomen, he found no tumor to remove. This case certainly should not be included in the unsuccessful operations for this disease. The same distinguished surgeon has since reported two cases of the operation, but their results have not been known.

Thus we find in the *twelve* operations that have been performed for the removal of this disease, *seven* have been successful, and two remain doubtful.

ART. V. *On the Office of the Nitrogen of the Air in the Process of Respiration.* By LEWIS C. BECK, M. D., Professor of Chemistry in the Vermont Academy of Medicine.

THE part which the large proportion of nitrogen in the air of our atmosphere performs during respiration, has often ex-

* Good's Study of Medicine, p. 423.

† Med. Chir. Rev. vol. v. p. 216.

‡ Am. Med. Rec. 1822.

cited the attention of chemists and physiologists: but until recently the investigations upon this point have not been attended with much success; and, even at the present time, the opinion is generally maintained that the nitrogen is entirely passive, or at least, that its only use is to neutralize the energetic properties of the oxygen. This view, which has retarded, nay, almost stopped, the progress of enquiry, has, however, been shaken by the recent and well conducted experiments of Dr. Edwards. In examining these experiments, it occurred to me that nitrogen performed other offices, which have not, to my knowledge, been assigned to it. These views I now present for publication, in the hope, that even if they are ultimately found to be incorrect, they may open a new subject for chemical and physiological enquiry.

That acute physiologist, Dr. Edwards, has shown that the quantity of nitrogen given out by the same animal during respiration, is very variable, being at one time increased, at another diminished, and at a third remaining wholly unchanged.* These phenomena he has traced to the influence of the seasons, and to other causes. It has also been shown by Messrs. Allen and Pepys, that when animals are confined in vessels of oxygen gas, or in an atmosphere composed of 21 measures of oxygen, and 79 of hydrogen, the residual air contains a large quantity of nitrogen; and in the latter case, a portion of hydrogen was consumed. Messrs. Dulong and Despretz inferred from their experiments, that the proportion of nitrogen was in all cases greater in expired air, than in that which was inspired.

It does not appear, then, to admit of a doubt, that nitrogen is constantly exhaled or given out by the lungs. The well conducted experiments of Priestley and Davy, show that nitrogen is also absorbed or consumed during respiration.

Having premised these observations, the position which I shall advance is, that nitrogen, as well as oxygen, is absorbed by the blood; that during its passage through that fluid, it combines with carbon, and forms *cyanogen*; and that this last, uniting with iron, exists in the blood in the form of a *cyonide of iron*.

In support of this view, I offer the following facts and reasonings.

1. It has been satisfactorily shown, that many, if not all, the gases, may be taken into the circulation. It is also known, that a large proportion of carbon exists in the blood. If, then, nitrogen is absorbed during respiration,

* De l'Influence des Agens Physiques sur la Vie.

there is no greater difficulty in supposing that it combines with a portion of carbon, than that oxygen should do so, which appears to be generally admitted.

2. As to the nature of cyanogen, which it is important to understand in this enquiry, it may be stated, that Gay Lussac has ascertained by detonating that gas with a due proportion of oxygen, that 100 measures of cyanogen require 200 of oxygen for complete combustion, that no water is formed, and that the products are 200 measures of carbonic acid, and 100 of nitrogen. From whence it follows that cyanogen contains its own bulk of nitrogen, and twice its volume of the vapor of carbon, and consequently consists of

1 proportional of nitrogen, and
2 proportionals of carbon.

3. Cyanogen is obtained from blood as well as other animal matters, by various processes; though the opinion heretofore maintained by chemists is, that it is generated during the processes employed, and that it does not exist *ready formed* in the blood. But upon studying these processes with attention, it will be found that they all have in view the formation of the hydro or ferrocyanates; and no attempt has to my knowledge been made to obtain the cyanogen in a separate state. Granting, however, that cyanide of iron, or even of mercury, existed in the blood, would the process of obtaining Prussian blue differ from that now adopted? I answer no: the same steps would be necessary: the decomposition of the cyanide by means of an alkaline metal would require the application of heat, and after that, the addition of the sulphate of iron would furnish the ferrocyanate.

4. The views which I have proposed will happily reconcile the discordant results of chemists concerning the existence of iron in the blood. This point has exercised the ingenuity of some of our ablest chemists. Although iron had been detected in the ashes of blood by several, it is only lately that we have been made acquainted with a method of proving its existence by the liquid tests. This method was discovered in 1825, by Dr. Engelhart, a German chemist. It consists in transmitting a current of chlorine gas through a solution of the red globules, upon which the color disappears, white flocks are thrown down, and a transparent colorless solution remains, in which the peroxide of iron can be detected by the usual reagents. These results have since been confirmed by professor Rose, and other chemists.

Now it is believed that the presence of cyanide of iron cannot be detected by any of the liquid tests with which we

are acquainted, or in other words, that the iron in this compound cannot be made apparent. But it has been ascertained by M. Serullas, that when moistened cyanide of mercury is exposed to the action of chlorine gas, cyanide of chlorine is formed, and bichloride of mercury is thrown down. Reasoning analogically, similar phenomena would be presented by passing chlorine gas through a solution of cyanide of iron; the compound of chlorine and cyanogen would be formed, and the iron would be rendered evident to liquid tests in the form of the peroxide.

These are the principal arguments which I have at present to offer in favor of the opinion which has been advanced. If it be asked why it has not been submitted to the test of experiment, my answer is, that there is greater difficulty in doing so than may at first sight appear. Supposing it previously proved that cyanide of iron, or the hydrocyanate of iron, existed in the blood, what process would be adopted for separating the cyanogen from its combination? If in the state of an hydrocyanate, we might, by passing a stream of carbonic acid through it, separate the hydrocyanic acid; but even this would require the application of heat; and, moreover, hydrocyanic acid is very liable to spontaneous decomposition, and is resolved into its elements. Or, supposing the actual existence of cyanide of iron, we should probably be able to decompose it by a stream of sulphuretted hydrogen, which would afford hydrocyanic acid and sulphuret of iron; but in this case, also, the expulsion of the acid would require heat. In either of these methods, therefore, though, as might be inferred from what is already known, we should be successful, the formation of hydrocyanic acid might be ascribed to the heat employed in the processes.

There is one method, however, which appears to me destitute of objection on this score; and it is to submit a portion of blood to the action of chlorine gas, for the purpose of ascertaining whether cyanide of chlorine can be formed in this manner. If successful, it would, taken in conjunction with the known effect of chlorine upon blood, (*viz.* that of rendering the iron manifest by the ordinary tests,) amount to a complete demonstration of the presence of cyanide of iron. This process, however, is tedious and difficult, and I must leave it to those who are better acquainted with the nature of this singular compound, and who possess better advantages for pursuing researches of this kind.

I cannot refrain from applying the above view of the constitution of the blood, to the explanation of the production of animal heat.

Notwithstanding the experiments of Mr. Brodie, it appears to be very generally allowed, that a portion, at least, of animal heat, is derived from the formation of carbonic acid during respiration, in the manner suggested by Dr. Crawford. But according to the most accurate experiments, only a part of the heat can be accounted for in this manner. The remainder has been ascribed to various causes, as the processes of nutrition and secretion, and even to the friction of different parts of the body upon each other. But it occurs to me that if the views here advanced are correct, we need not look elsewhere to account for this additional quantity of heat. If cyanogen is formed in the course of the circulation, and united with iron, a portion of heat must in this way also be generated, and thus the whole might be placed to the account of respiration alone.

These are the facts and reasonings which have induced me with some confidence to advance the opinion *that during respiration, the nitrogen of the air is absorbed by the blood; that it combines with the carbon in the blood; that the cyanogen thus formed unites with iron; and that cyanide of iron is, therefore, one of the constituents of that fluid.* If this is admitted, the formation of hydrocyanate of iron could be easily shown, and perhaps the study of this would lead to more correct notions concerning the difference between venous and arterial blood, especially as it regards color. But fearing I may already have trespassed the precepts of the Baconian philosophy, I forbear pursuing the subject at present.

[We are indebted for the following communication to the publishing committee of the Medical and Philosophical Society of New York, who have kindly promised to furnish us with additional essays for the successive numbers of this Journal.]

ART. VI. *Remarks on Intestinal Concretions, and the History of a Case.* By LUKE BARKER, M. D., Member of the Royal College of Surgeons, London. Read before the Medical and Philosophical Society of New York. With a plate.

THE subject of this communication, although not of every day's practical importance, as many others which might have been selected, is of so interesting a nature, that no apology need be offered for laying it before the society. To the rarity of the disease, we may attribute the little attention hitherto paid to it; for, few indeed are the individu-

als, out of the great mass of practitioners, who are ever called upon to witness the distress caused by this severe and almost unmanageable complaint.

To prove that this statement is correct, I shall transcribe a page or two of an excellent work on *Morbid Anatomy of the Human Gullet, Stomach, and Intestines*, by Dr. Monro, Jr., of Edinburgh, published in the year 1811. After having examined his father's extensive collection of concretions, the doctor says, "I consulted, from the desire of obtaining a farther information on the subject, the works of the most eminent pathological authors, and subjoin the result of my researches.

"The museum at Leyden, formed out of the joint anatomical collections of Rau, Albinus, Ledeboer, Van Doeveren, and part of the museum of Ruysch, and of the numerous dissections of the pupils of that seminary of medical instruction, contains, according to Dr. Edward Sandifort, (who has published a description of it in two large folio volumes,) only one specimen of an alvine concretion, and that was found in the ilium.

"Dr. Walter, of Berlin, has published, in three large quarto volumes, a descriptive catalogue of the anatomical museum which he sold to the king of Prussia, but has described only one case in which he met with an alvine concretion. 'Quæ inter membranam muscularem et nerveam ventriculi haesit.'

"Morgagni, who practised in Italy, has published the history of several calculi which he met with in the alimentary canal; but, from the description of these, I am inclined to suppose that the greater part of them had been formed originally within the gall bladder or biliary ducts, and had passed afterwards into the intestinal canal.

"Dr. Portal, of Paris, from the manner in which he has expressed himself in the 5th vol. of his *Anatomie Medicale*, seems to me to have met with only one example of an alvine concretion within the stomach, and only one case of a concretion within the intestines.

"Baron Haller, who was for many years a professor at Gottingen, has not described a single case in his *Opuscula Pathologica*, in which he met with an alvine concretion."

Dr. Monro says that he also consulted "the *Lithologia* of Martin Schurig, published at Leipsic, who appears to have met with only three or four cases of calculi in the alimentary canal, but he has many quotations." He seems to have met with but one case in which the concretion was like to most of those in the museum of the university of Edinburgh, and

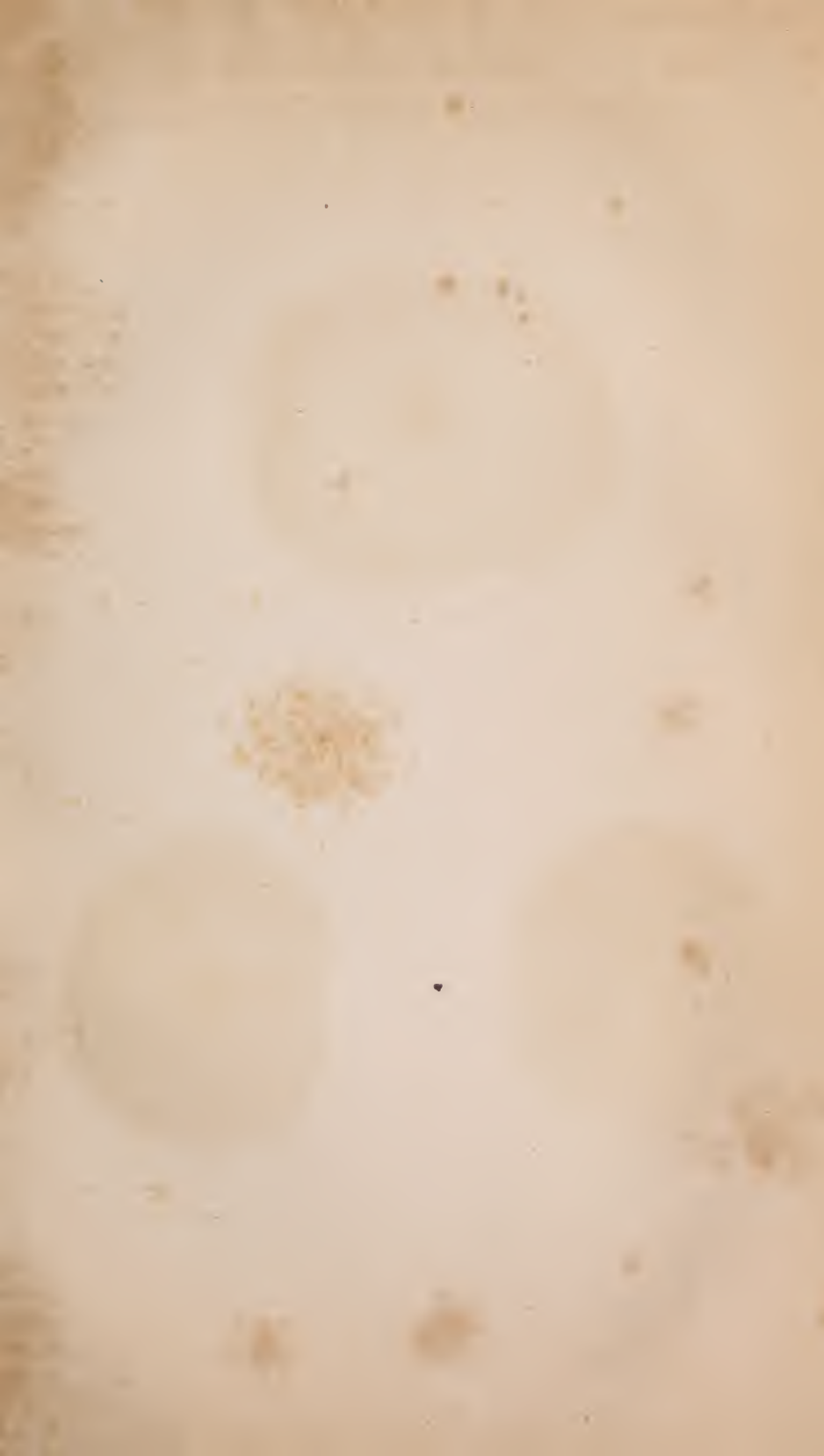
which he calls, "substantia rara et spongiosa, magnitudine dimidii ovi."

The late Dr. Matthew Baillie, of London, states, (and very few physicians ever arrive either at his degree of eminence or practice,) that he has never found any traces of intestinal concretions, out of the vast number of bodies which he examined.

The largest collection which we have any knowledge of, so far as has come under my notice, is that collected by the elder *Monro*, the amount of which, consisting of forty-two specimens, is given by his son in the work already quoted.

Dr. J. Mason Good, in his work on the *Study of Medicine*, has given us a genus of concretions, under the name of enterolithus, class *cæliaca*; he described three species, viz.: bezoar, calculus, and scybalum, but in none does he describe the kind which is now more immediately to claim our attention, and which is so accurately described in *Dr. Monro's* work.

Before I proceed further, I will briefly relate the history of the case which furnished this specimen. In December, 1815, being then a practitioner in Lancashire, England, I was called to visit *Richard Grimshaw*, aged from twenty-five to thirty years, a cotton weaver. He was of a spare habit of body; had generally lived on a plain simple diet, and had seldom indulged in irregularities of any kind. He complained of a pain in his bowels; they were sometimes relaxed, but more generally costive; and when in the latter state, the pain was much increased, and accompanied with vomiting. His appetite was tolerably good, except during the exacerbations of pain; the pulse, and the temperature of the body, were both natural. Sometimes he could feel a swelling in the umbilical region, a little to the right side; but this was not at all times distinguishable. On examining his abdomen, I found a deep seated tumor, about the size of a chicken's egg, but not at all painful to the touch; it would frequently recede from the hand, and several minutes would elapse before it could be felt again. The history which he gave of his sufferings was rather loose and imperfect, and it was not till after several visits, that I was able to form anything like a correct diagnosis of his complaint. On one occasion he informed me that something like sixteen or eighteen months previous, he hastily eat a quantity of small plumbs or cherries, and swallowed the stones; and that nearly ever since, in a greater or less degree, he had experienced a pain in his bowels. From this circumstance, together with the gradual increase of the tumor, and the obstinacy of the disease defying every



Dr. Barker's Case of Intestinal Concretion.



effort of medicine, except short intervals of palliation, I concluded that a concretion was formed in the intestines, causing mechanical obstruction, and which gave rise to all the sufferings of the poor patient.

I continued to attend him to the day of his death, a period of from four to five months. The treatment consisted of purgatives, (and I may say that almost every kind was used, but sulph. mag. appeared to do the best,) injections, opiates, and antispasmodics, friction, blistering, and emollient and narcotic fomentations, but such was the violence of the pain, particularly for some weeks before his death, that it required sulph. ether ℥j., and the same quantity of tinct. opii. every twenty-four hours, in order to procure a few moments of ease. The tumor increased to about double the size, or at least had the appearance of doing so; and such was the emaciated state of the body, particularly of the muscles of the abdomen, that I could grasp the swelling with the greatest ease. At last it produced a complete obstruction, as nothing passed per anum for weeks, except the injections that were used. The contents of the stomach, with those of the intestines above the obstruction, were ejected by the mouth. The tumor would frequently change its position; sometimes it would be in the centre of the abdomen, sometimes towards the left side, but most generally towards the right; this change was no doubt owing to the peristaltic motion of the small intestines, as afterwards proved on dissection.

I am quite satisfied from reflecting on the case, as were those with whom I consulted, that if the concretion had been removed by an operation, the life of the patient might have been saved. But at that period I was young in the profession, and in many respects inexperienced, and perhaps unaccustomed to think much beyond what I had either heard or read, so that the life of the poor patient was suffered to terminate, without any vigorous effort having been made to prevent it.

The body was examined twenty-four hours after death; it was very much emaciated, as observed in cases of marasmus. The tumor presented itself in the umbilical region, a little to the right side. An incision of about three inches in length laid bare the concretion, contained within the ileum, and from which it was easily removed. It completely plugged up the gut; and must, as had been anticipated, have prevented the passage of the contents of the intestines. The cavities of the abdomen and thorax were examined, but no traces of disease could be discovered.

The accompanying drawing represents the size and ap-

pearance of the concretion; it measures one and five eighths of an inch in diameter, and five in circumference, and its weight is nearly 3viii. The external color is not unlike that of an unripe peach, or as Dr. Monro says, resembling that of bad yellow ochre of iron; its internal structure, as we may see by referring to the plate, is not improperly compared to dried sponge, pressed together in concentric layers, and having in the centre the stone of the fruit.

I shall close these few remarks with an extract from the work already quoted, on the chemical nature of concretions, as furnished by Dr. Thomas Thomson of Edinburgh. The doctor says, "The concretions which I have examined are of a much more compound nature than I expected, and contain two substances of a nature quite peculiar, or at least with which I was not before acquainted. The following observations will convey a general idea of their nature and composition.

"First. At first they swim in water; but that is owing to the numerous pores filled with air, which they contain. Accordingly, they soon sink to the bottom, and remain there. The specific gravity I found to vary in different specimens, from 1,376, to 1,540. I consider 1,400 as about the specific gravity of the whole.

"Second. When left in cold water they soon communicate a brownish tinge. The water was found to have taken up the following substances: 1st. Albumen, which was separated in white flakes by boiling the water. 2d. A brown substance, which I consider as peculiar. It dissolved at first in water, but became nearly insoluble by the slow evaporation of the liquid. It dissolved in alcohol. It approached most nearly in its properties to vegetable extractive; but the quantity I obtained was too small for an exact examination. 3d. Common salt, which crystallized when the water was allowed to evaporate spontaneously in an open vessel. 4th. Phosphate of lime, which was precipitated by ammonia. 5th. Sulphate of soda, in a very minute proportion. 6th. Perhaps also sulphate of lime; but the quantity of this salt must have been very small."

The doctor goes on to state, "That after the action of several reagents, there remained behind a peculiar substance, having the color and texture of the concretion. Ten grains of the concretion left 1,2 grains of this matter. It was very light, and had the appearance of cork, or rather of the peculiar fungus which is used on the continent for tinder, and which the French call *amador*. It was in very short threads. The substance is tasteless, insoluble in water, alcohol, ether,

potash ley, and muriatic acid. It burns with a slight flame, and rather like a vegetable than an animal body. It is undoubtedly of a peculiar nature, differing from every animal and vegetable substance hitherto examined.

“The concretion consists essentially of alternate layers of this peculiar substance, and of phosphate of lime. Sometimes the substances are intimately mixed, instead of being in alternate layers. The albumen and brown matter seem to serve as a cement. The other substances are in a small proportion.”

ART. VII. *Case of Poisoning from the Bite of a Spider, successfully treated.* By ABNER HOPTON, M. D., of North Carolina.

ON the afternoon of July the 10th, I was summoned in great haste to Stephen Herring, whom I found suffering in the most violent and excruciating pain, occasioned, as I was informed, by the bite or sting of a spider.

The following is a short history of the case. On the morning of the day on which I was called to prescribe for him, he had crossed a small river: upon his getting over the river, he picked up an old pail, on which he perceived three small black spiders, which he attempted to kill, but did not succeed. A few minutes after, he felt a slight painful sensation on his left leg, not unlike that produced by the sting of an ant; it occurred to him, however, that it might be something worse, and he was therefore induced to examine it: upon drawing up his pantaloons, nothing could be discovered except a small red elevated protuberance, which burned and smarted considerably; it was situated about four inches below the knee, and on the inside of the leg. Although there was no spider to be found, still, Mr. H. was decidedly of the opinion that the spot originated from the sting of one.

He proceeded on his way to a field where some of his negroes were employed. It was not long after this he began to experience severe pain, extending up the leg in the course of the lymphatics, to the inguinal glands; these became inflamed, tumid, and excessively painful. To these symptoms succeeded cold shiverings, chatterings of the teeth, tremors of the limbs, spasms, nausea, dysuria, and extreme pain in the back and loins.

In this situation he bent his way home, and happily for him the distance did not exceed twenty minutes walk; had it

been more, in all probability he would have perished in the woods. Upon reaching home, he became excessively faint and exhausted; a deathlike coldness prevailed his whole frame, accompanied with cold shiverings, clammy sweats, total inability of locomotion, and great aberration of intellect.

Various were the remedies prescribed for him previous to my being called in, such as the popular prescriptions in common use for the bites of venomous reptiles, viz. plantain, hoarhound, boneset, edgeweed, rue, tanzey, squirrel's ear, wormwood, milk, oil, spirits, vinegar, and a farrago of other ineffectual remedies. He had also been bled, and a variety of topical applications employed, but all to no purpose.

I saw him late in the evening, and must confess I never saw a person in any case, and under any circumstances, in more exquisite pain. I found him in bed, supported by three persons, in a reclined posture; every other position was to him insufferable. He complained of violent pain in his back and loins, and when spoken to, replied with a loud tone of voice, and with apparent difficulty. His spasms were extreme, and occurred at short intervals; the pulse was small, frequent, and laboring or irregular; the pupils dilated—skin covered with a profuse cold sweat; the urine suppressed, muscular power totally suspended, and the intellectual energies much impaired.

I prescribed for him large opiates, anodynes, antispasmodics, and stimulants, both diffusible and permanent: among these were volatile alkali, æther, opium, camphor, amber, compd. tinct. castor, lavender, brandy, cantharides, arsenic, and a host of others without effect. Large doses of calomel and opium were also given; but the bowels were not in a situation to be excited by cathartics while the spasms continued.

As no remedy appeared to have the desired effect, although prescribed *ad libitum*, I was necessarily compelled to relinquish most of them, and trust solely to opium and ammonia as the only medicines that were likely, in the event, to insure a successful issue. The first for the purpose of allaying morbid sensibility and spasms—the second as a stimulus for maintaining a regular and uniform balance of excitement in the system, while under the sedative influence of the morbid venom.

By pursuing this course through the night, and exhibiting the medicines in large doses, and frequently repeated, I ultimately succeeded in relieving all symptoms. Much, however, might be attributed to the spirits of turpentine, for it was not until this was employed that the disease seemed to yield.

Mr. H. had a slow convalescence, but finally recovered, although he had to use crutches several days.

Dr. Beck, in his *Medical Jurisprudence*, (an invaluable work,) page 470, vol. 2, on the subject of animal poisons, observes, "that he has not been able to find any well authenticated cases respecting the bites of spiders." I therefore offer this, and with it, indeed, might offer two others, as well authenticated.

ART. VIII. *Observations on Tetanus.* By Dr. JOHN S. BOWRON, of New York. Read before the New York Medico-Chirurgical Society.

AT our last meeting I gave an account of a case of tetanus, which apparently was produced by intense grief. The tetanic spasms were completely removed by the administration of large quantities of powerful antispasmodics, and the constant application to the epigastrium of flannels, wrung out in warm brandy. The detail of the case was accompanied by some remarks, tending to prove that tetanus originates from an irritation or disease of the nerves of motion. In confirmation of this view of the nature of tetanus, I will now proceed to mention some of the facts upon which this opinion is founded. I may, perhaps, be permitted to remark, that it is with much deference to the opinions of the many learned and eminent physicians, who have expressed their sentiments upon this disease, that I venture to point out what I consider the true pathology of tetanus.

The importance of the discoveries of Mr. Charles Bell, relative to the difference of function between the nerves of motion and the nerves of sensation, is, I believe, universally admitted. And, although like all other parts of the animal machine, there is an intimate relation and connection between them, yet each system is governed by laws peculiar to itself. The nerves of sensation convey impressions to the brain, and are the medium through which we become acquainted with the beings around us. On the perfection and integrity of these nerves, and the source from which they originate, depend all our knowledge and intellectual powers. The nerves of motion, on the contrary, convey no impression of any kind to the sensorium. Their office is to produce action or motion in the muscles to which they are distributed. If the motory nerves are injured in any way, they are immediately convulsed. By puncturing them with an instrument, we can

produce the same kind of spasms which we observe in ordinary spasmodic diseases. If we injure or puncture the nerves of sensation, the impression will be transmitted to the brain, but no action or motion of the injured part will be perceived.

These two systems of nerves are hardly ever in a state of equilibrium. Circumstances, which are forever happening, dispose one system or the other to be more fully developed. Consequently we observe in athletics, those who are capable of great muscular exertion, that the nerves of motion and the spinal marrow are larger and more fully developed than the nerves of sensation and the cerebral organs. This will account for the frequency of tetanus among the athletic and robust, those in whom the physical powers preponderate over the intellectual. For it is a fact, well known to every practitioner, that the preponderance of any one organ, or part of the system, over other parts, will dispose the organ thus disproportionately developed, to be more exposed to deleterious and morbid impressions. This unnatural preponderance of one system over another, produces those peculiarities of the constitution that physiologists have reference to, when they speak of the different temperaments of individuals. When the brain and nerves of sensation predominate, we observe a peculiarity of the constitution, which we denominate the nervous temperament. People of this temperament are very subject to epileptic convulsions, a disease which particularly implicates the nerves of sensation.

That there is a radical difference between epileptic and tetanic convulsions, with respect to the parts of the system primarily affected, is sufficiently apparent from the phenomena of the two diseases. In tetanus we see the most violent convulsions, affecting, in many cases, every voluntary muscle of the body, and yet the mind, in the generality of cases, is perfectly sound and unimpaired. Epileptic convulsions, on the contrary, although the spasms may be comparatively light, uniformly produce an abolition of sense and intellect, which proves beyond the possibility of a doubt, that the morbid irritation is upon the brain and nerves of sensation. That the primary irritation producing tetanus is seated in the nerves of motion, and the motory portion of the spinal marrow, and not on the brain and nerves of sensation, might also be inferred, independently of all other proof, from the fact that it is impossible to conceive, and still more impossible to believe, that a disease so violent in its effects, so overwhelming to the powers of life, and so rapidly fatal in its termination, could primarily affect the cerebral organs, without producing other symptoms consistent with the known

operation of morbid impressions upon the brain. Instead of furious delirium, or high and violent febrile commotion, we generally find tetanic patients free from fever, and perfectly calm and rational. This exemption of the cerebral functions could not exist, if the brain and nerves of sensation were the seat of disease.

We are fully aware that the autopsic observations that have hitherto been made, have not afforded that information relative to the actual condition of the motory nerves, in those who have died with tetanus, which would be desired; yet if post mortem examinations should forever fail to discover any inflammation or lesion of this portion of the nervous system, we should, notwithstanding, barely from the symptoms, have all the evidence that we need to have, that the nerves of motion are primarily effected in tetanus. It is, indeed, very probable that inflammation, in the majority of the cases of tetanus, does not exist, but rather a high state of irritation; consequently this condition of the parts could not be discovered by dissection.

The diseases of almost every part of the animal machine, excepting the motory system of nerves, have been carefully investigated by medical men. The comparative neglect of the nerves of motion, has undoubtedly arisen in consequence of our ignorance of the functions of this division of the nervous system. The brilliant discoveries of Mr. Charles Bell will undoubtedly open a wide field for the further investigation of the pathologist: and we are inclined to believe that the primary cause of many diseases, which have hitherto eluded the enquiries of physicians, will be found to exist in the nerves of motion. Even more, we do not hesitate to express our belief that hydrophobia, chorea, whooping cough, asthma, &c., are produced, or at least materially modified, by affections of this system of nerves.

There is a peculiarity which particularly distinguishes the class of diseases we have mentioned. It is very seldom that we discover in their simple state, even though they are manifested by the most violent symptoms, any considerable degree of febrile disturbance. When fever is produced, it is rather in consequence of the severity of the paroxysms having induced affections of particular organs, than by kindling up a local affection, by which the febrile symptoms are produced.

In order to treat a disease with propriety, it is absolutely necessary to know where the primary affection is seated: without this knowledge all our practice is empirical, and consequently, actually dangerous. When the primary affection

is understood, we can always prescribe with confidence, and upon scientific principles. The true and fundamental principles of practice, in all diseases, consist in diverting from the organs oppressed by morbid irritation and congestion. "The actions of diseased organs are to be opposed most successfully, by rousing up and antagonizing against them, the actions of the organs or tissues that have not partaken of the morbid condition it is intended to relieve." These observations of Dr. Samuel Jackson, of Philadelphia, are applicable to the treatment of all complaints; and upon these principles we should attempt the treatment of tetanus.

As it was not my intention to say much relative to the treatment of tetanic affections, I shall barely mention an outline of the practice I would recommend. It was observed by Hippocrates, that whenever a considerable pyrexia supervened, tetanus was uniformly relieved. He therefore endeavored to produce a febrile condition in all cases, and when he succeeded in doing this, the convulsions generally ceased. We here perceive that the father of medicine, from observing facts, was led to the adoption of those principles of practice, founded upon laws of the animal system, of which, in all probability, he was ignorant. A careful observation of facts, undoubtedly led the comparatively ignorant inhabitants of the Friendly Islands, to the practice which among them is so very successful in removing tetanus. They introduce a cord along the urethra, and through the perineum, thereby inducing violent irritation in this highly sensible organ. Here, again, we observe the principle of diverting from diseased organs, adopted by those, who, perhaps, are entirely unacquainted with its operation. I mention this practice, not to recommend its adoption, but to illustrate the utility of treating tetanus, upon the plan of exciting an action in the system, in consequence of which, the diseased action will be relieved and ultimately destroyed. To effect this, in the generality of cases, I would advise the use of the warm bath, alternated with cold affusions—the free administration of tonics and antispasmodics, active cathartics, and a free use of calomel, together with blistering along the whole course of the spinal marrow. These means, occasionally modified, to suit the different forms of the disease, with the addition of other medicines that might be called for by particular symptoms, would constitute the principal part of the practice I would recommend in the treatment of this formidable disease.

ART. IX. *Case of Apoplexy, following a blow on the Cranium.* By H. T. JUDSON, M. D., of New York.

MRS. B., a widow lady aged sixty-five, in the latter part of April, received a severe blow upon the head, which caused her much pain at the time; but as the scalp was uninjured, and the pain soon abated, the accident was forgotten. Occasionally, however, she complained of nausea and headache, until the beginning of August, when strongly marked symptoms of apoplexy supervened. They were subdued by bloodletting, cathartic medicines, and counterirritation. The pain in the head afterwards became constant, accompanied with irritability of the stomach, febrile heat and dryness of the skin, a white tongue, and quick hard pulse. She was put upon an antiphlogistic regimen, which appeared to moderate the violence of the symptoms, and afford a reasonable prospect of her speedy recovery.

Under these circumstances she returned to her usual avocations, superintending the concerns of her family, though never entirely free from pain and dizziness of head, together with symptoms somewhat inflammatory. In October, she manifested a tendency towards paralysis, and the indications of an accumulation of fluids in the cavity of the cranium were now apparent. Copious depletion was resorted to, attended with blisters to the nucha, and issues on the extremity. These means gave temporary relief, but did not remove the disease. The arm and leg of the left side became wholly useless—the pain of the head and eyes very intense—tongue was covered with a thick dark fur—at the same time a large phlegmon arose on the left side of the cranium, near the lambdoidal suture, which proceeded to suppuration, and discharged laudable pus several days. The issue now healed, the discharge stopped, and the patient evidently was sinking. She died on the 29th of December.

Dissection twelve hours after death. Dr. J. G. Hardy, (since deceased,) and myself, removed the scullcap, upon which about two ounces of blood and serum escaped from the dura mater. This seemed to have been confined to the right side of the cranium, and was found directly under the most prominent part of the parietal bone, to which spot the patient referred as the seat of distress, and on which the blow had been received. The blood vessels beneath the dura mater were remarkably distended with blood: the whole cortical portion of the right hemisphere was of a dark brown

color, while the left side of the cerebrum exhibited no appearance of disease whatever.

Not the slightest traces of fracture of the cranial bones could be discovered, on a careful examination. The dissection was pursued no further.

As examples are eloquent, it may not have been improper to record the preceding case, though it may admit of a reasonable doubt, whether or not the external injury was the cause of the disease. Perhaps the most remarkable cases are not the most instructive. But every pathological fact is deserving of attention, and every example of successful or unsuccessful practice may throw light upon the path of science, and serve either as a guide or a warning to the physician. The point is still disputed, whether apoplexy belongs to diseases of the sanguineous function, or of the nervous system. Dr. Good places it among those of the latter, and gives some excellent reasons for this arrangement, which are worthy our serious regard and attention. He remarks: "Although in most cases the more prominent symptoms concur with the appearances on dissection, in leading us to compression of the brain as the primary cause of the disease, yet we shall find presently that it has taken place where no such compression seems to have existed, while we have already had occasion to notice a variety of affections of the head, attended with forcible and severe compression, as inflammation and dropsy of the brain, that have run their course without any mark of apoplexy, whatever: to which should be added, that in most other diseases, accompanied with compression of the brain and a suppression of sentient and motory power as a consequence thereof, such suspension ceases almost the moment the compression is removed, when the nerves of feeling and of motion resume their wonted activity, and evince no tendency to relapse: in apoplexy, on the contrary, the result is always doubtful; for a palsy of some part or other is a frequent and permanent effect, or the mind suffers in some of its faculties, and a relapse is generally to be apprehended. So that though compression of the brain, and particularly from a morbid state of the sanguineous and respiratory functions, may be justly regarded as the ordinary efficient cause, there seems to be, at the same time, some *peculiar* debility or other diseased condition of the sensorial system, to which apoplexy is primarily to be referred, and without which it might not take place." These observations involve an important principle, namely, that apoplexy, and, by parity of reasoning, other diseases, depend upon something essentially different from mechanical fulness, compress-

ion, or excitement, for their existence and development. This principle has been too much neglected, in most, if not in all, the systems of modern pathology. We are gravely told that disease must consist in structural alteration in the tissues, and that such change gives place to increased action or excitement. Herein pathologists show that however free they may be from humoral prejudices, the notion of mechanical motion still maintains a sway over their opinions. When investigating the origin, seat, and nature of disease, we should remember that vitality is something more than mere motion—disease more than the disturbance of motion. It seems to me sufficiently obvious that disease is not necessarily dependent upon either increased or diminished excitement. There is an increased action of the capillary vessels in blushing, but who considers this a disease? There is lessened activity of the mental faculties after a full meal, but who would call this a disease of the brain? The excitement of the system, generally, or of any part or organ, may be either higher or lower than usual, without disease: again, disease may be accompanied with more or less action than ordinary, but its essence, if I may use the expression, does not consist in such increased or lessened excitement. Nor is disease something superadded to organization. Names are frequently mistaken for things; and when we speak of a fever coming and going, we are apt to consider an abstraction a reality. Health is a name given to the due activity and perfect performance of the functions of our animal body; disease is a name applied to a morbid action of the same functions, whether we regard it as necessarily connected with structural derangement or not. Neither health, then, nor disease, is anything added to organization. Disease is morbid excitement. Without this morbid action, no manifestation of disease can be given. This morbid action may, or it may not, be attended with increased motion. On this morbid excitement depend the specific differences of disease; without it, we repeat, there can be no disease. This principle has been too much overlooked. By some it is denied that there are any specific diseases. In a public discourse, such a denial may serve to grace a sentence or to turn a period, but it will avail us little at the bedside. The action set up in the system by typhus fever, or in other words the morbid action constituting typhus, specifically varies from that induced by smallpox. The same observation applies to the operation of medicines. Experiments performed upon men or animals, in health, can never determine the effects of remedial agents in disease. How different are the operations

of powerful articles of the materia medica, such as opium or calomel, in ordinary health and in severe disease! Medicines do not act beneficially by producing increased excitement, or by lessening motion, but by tending to change morbid action to healthy. Every different article produces its specific effects. The excitement resulting from opium specifically differs from that occasioned by nux vomica, and the same is true in a greater or less degree of all other remedies. In adapting remedies to the state of morbid excitement constituting the disease, the skill of the physician is chiefly to be recognized, and the man of true science distinguished from the pretender. Healthy alternations of excitement occur daily; such are our states of sleeping and waking; diseased only occasionally, and sometimes periodically. While, however, I disbelieve that either increased excitement or debility is disease, or that disease is necessarily connected with either, I am persuaded that both may become predisposing causes of disease, or, in other language, induce the organs to commence morbid or diseased action. That disease is something besides action increased or diminished, is particularly manifest in affections of the brain. Take, for example, *delirium tremens*, in which some pathologists suppose the action is increased from a removal of narcotic stimulus, others diminished from the same cause, according to their respective views of the nature of spirituous liquors, and of the functions of the brain. Opium is administered to lessen excitement, and consequently to procure sleep. It is a good practice, but does not result from correct pathology. The action of the brain in that disease is not necessarily increased or diminished. It is morbid, and essentially differs from all other states of the brain.

If these views are correct, in apoplexy there is not merely compression, fulness of blood, or an accumulation of serum in the head, but also a diseased condition of the brain itself, on which the disease depends, and without which it would not arise. In the foregoing case we may consider the outward injury as the remote or occasional cause, though it does not follow that without it the disease could not have taken place. Disease consisting in morbid action has its origin in altered structure, in many cases, yet it would be presumptuous, perhaps, to deny that it may exist without any morbid change of this kind on dissection. Pathological researches, however, are peculiarly valuable, and should be encouraged. Nature delights in progress, and, as science is the knowledge of nature, she also delights in her onward course over obstructions; and while she overcomes difficulties and encoun-

ters perils, she diffuses her blessings upon her votaries with a liberal hand, and points out the way for farther discoveries.

ART. X. *A Case of Tetanic Convulsions, cured by Colchicum.* In a letter to the Editor, from ELIJAH MEAD, M. D., of New York.

DEAR SIR—

I beg leave to relate to you a few circumstances in relation to a case which occurred in my practice; and I do not offer them in consequence of the case being altogether anomalous, or particularly complex in its nature, but I would call your attention to a remedy, the powers of which, well known and appreciated in the treatment of several diseases, have not, I believe, been applied for the removal of that distressing affection with which the subject of the following case has been so much afflicted.

In this hasty sketch, I shall only touch at the more prominent features, both as regards the disease and its treatment.

B. Lambert, a colored girl, aged twenty years, called on me, in consequence of having passed a small fish bone into the end of the right thumb. The part was laid open without discovering any foreign matter. She was ordered to poultice the thumb, that should there be any irritating substance, it might be removed by suppuration. I saw her some time afterwards, when she informed me that the wound had healed, and that she now found very little inconvenience from it. In the course of a few months, she called again for medical advice; she had been suffering much for some time from severe pain in the thumb and arm, extending up to the shoulder, neck, and face. The symptoms were much aggravated at night—the paroxysms were extremely severe, depriving her of sleep. Her arm was peculiarly affected: after the severe recurrence of pain, the venous circulation would become suddenly arrested, and the vessels so much distended as to show very conspicuously their valvular course, and led the patient often to remark that “the veins of the arm were tied up into knots.” This turgid state of the vessels would be followed by an uncommonly copious cuticular discharge, and, to use the language of the girl, “the water frequently runs from my arm in streams.” These several symptoms were succeeded, for a time, by an almost total loss of sensibility in the limb. These paroxysms were

irregular as to their recurrence and power, but at no one time was she free from pain. The case at once seemed urgent, and not without some danger. Repeated incisions were made down to the bone of the thumb, in a direction that would have crossed at right angles any spiculæ of bone that might have been lodged there, but no matter of a foreign nature was discovered by the operation. To induce suppuration, the wound was filled with red precipitate, and the whole covered with a poultice; this, however, could not be effected, although various means were adopted to establish a discharge from the part. The thumb, and, indeed, the whole hand, became almost perfectly void of feeling, and neither could any impression be made by opening the wound, and immersing the part in hot spirits of turpentine. During this local treatment, in addition to bloodletting, large and frequently repeated doses of opium were given, with the only sensible advantage of getting occasional sleep. The symptoms, upon the whole, were assuming a more serious character, for the paroxysms were getting more protracted, and she would lay for hours under the influence of strong tetanic affection, followed by extreme debility. The plan of treatment was now changed, and she was ordered wine freely, and when she was able to take nourishment, her regimen was of the most generous and stimulating character. During the administration of the opium, and in connection with the present treatment, antimonial frictions were extensively made to the whole limb. Although the eruption became copious, and the other means were rigidly followed, yet little improvement was perceptible. She was now put upon the use of stramonium; one quarter of a grain of the extract was given, and gradually increased until she took one grain every hour. This medicine seemed to moderate the disease for a short time, but the pain and the spasm soon returned. The stramonium seemed to exert little or none of its specific effects, but produced a painful derangement of the bowels, accompanied by frequent and bloody stools: it was necessary to suspend its use, and correct its influence by proper remedies. Little benefit was anticipated in the repetition of the means already adopted. I had frequently seen the happy effect of colchicum in several powerful affections, not, however, bearing a very powerful analogy to the one before me, but for the want of a remedy which presented more, I was induced to substitute this. Thirty drops of the tincture from the root were given every four hours, and the dose gradually increased. After she had taken a few doses she expressed herself as better: she continued to improve—

her nights were more calm, and she had refreshing sleep. The colchicum was the only medicine she now used, and her improvement was rapid: the pain in the head and arm grew less daily, and in a few days more I discontinued my visits. In about a fortnight from the time she first took the medicine, she called on me to express her obligations for the attentions received, and, in reply to the question whether she was well, said, "I believe I am, I feel well, the drops I have taken have cured me."

Yours, &c.

E. MEAD.

New York, Beckman street, Oct., 1829.

ART. XI. *A Case in which the right Parotid Gland, in a State of Melanotic Enlargement, was extirpated.* By GEORGE McCLELLAN, M. D., Professor of Surgery in Jefferson College, Philadelphia. Communicated by JOSEPH E. SORBER, M. D., of Pottsville, Pennsylvania.

IN looking over a recent publication, (Tavernier's Surgery, translated by S. D. Gross, M. D.,) I found a note alluding to an operation which was performed on a brother of mine, and considering it, as I do, to be one of the most extraordinary attempts ever made to relieve a fellow mortal from inevitable death, I shall avail myself of this opportunity to place it more in detail before the medical public; not only as a tribute of respect to my friend, Dr. McClellan, but likewise as a case illustrating the practicability of removing an entire and enlarged parotid gland. It will at least decide a subject which has agitated the minds of many surgeons—some altogether denying its possibility, while others more intrepid pronounce it hazardous in the extreme, yet advisable under certain circumstances.

The present case was of about five years standing. I first saw the tumor in 1825, which then appeared to be situated immediately over the parotid gland. Not having time to operate, I advised the patient to call on his family physician and have it removed. It was neglected, however, from time to time, until the month of April, 1829, when, at the urgent request of my brother, I again visited him from my place of residence, (Pottsville, Schuylkill co., Pa.,) and was astonished to behold the increase of the tumor, and the ravages it had made on his constitution. I doubted the possibility of his being relieved from the hectic fever which had afflicted him for the preceding few months. He had, however, been long

troubled with a loss of appetite and difficulty of deglutition, and pain on the least motion of the jaw. I stated to him my ideas of his case, and my fears on the prospect of a cure; but at the same time advised a consultation with Dr. McClellan. In the consultation which followed, Dr. McClellan agreed with me in opinion, as to the dangers of the case, and declared that the sooner the enlargement could be removed the better. Accordingly the operation was soon after performed by him, at my request.

He proceeded to the removal of the tumor, first by making a curvilinear incision on each side of it, commencing just above the zygoma, and extending down the neck until they met about two inches below the angle of the jaw. These were depressed until the masseter muscle and angle of the jaw were exposed in front, and the mastoid process and muscle behind the tumor. As the chief mass of the tumor appeared to extend below and behind the face, where it was firmly wedged down, beyond the reach of all further dissection in that direction, the operator changed his mode of proceeding, and began to extend the incisions about two inches further down the neck. This brought into view an oblong process of the tumor, about two inches in length, and three fourths of an inch in diameter, which extended down from the main body of the gland, and was lodged in the common sheath of the great vessels. On raising this process of the tumor from below, the common carotid artery and jugular vein were fairly exposed, opposite the side of the thyroid cartilage. As the whole surface bled profusely, we concluded that it would be necessary to take up the carotid artery. It was accordingly secured at once, with a single ligature; immediately after which the hemorrhage subsided, and the exposed surface became perfectly dry.

Dr. McC. then proceeded to burrow under the body of the tumor, using the handle and occasionally the blade of his scalpel. The back part of the tumor was then found to be attached to the transverse processes of the two upper cervical vertebræ, and to have become imbedded in, or incorporated with, the posterior belly of the digastric, and the upper portions of the sterno-mastoid and trachelo-mastoid muscles. These muscles were therefore cut away, in part, and the bones denuded; after which, the tumor was dissected upwards from underneath the ramus of the jaw and mastoid process: the styloid process being laid bare, and also the slender muscles which originate from it. In this part of the operation, the trunk of the *portio dura* was brought up from under the mastoid process, and of course divided along

with the tumor. Several branches of the external carotid were also divided, two of which bled from the recurrent circulation, and had therefore to be secured; viz., the occipital and facial arteries.

The mass which had thus been elevated was evidently a morbid enlargement of the parotid gland, partially enveloped in a thin capsule, and composed of a black medullary substance, interspersed among the healthy looking granules of the parotid. The back, or under part, of this mass, had no capsule, and the deepest part of the exposed cavity, which corresponded with this, was occupied by a healthy looking portion of the gland, in which a large branch of the nerve was seen ramifying. We agreed that it would be improper to leave this remnant of the gland behind. Dr. McClellan, therefore, dissected it out completely, and brought it up over the zygoma, along with the morbid part which he had before raised above the jaw. This last step was followed by an alarming gush of arterial blood, which most probably proceeded from the internal maxillary artery, but was speedily arrested by the tenaculum and ligature.

The whole mass, in one partly divided body, was finally dissected away from the zygoma, to which it was firmly tied by a tendinous fascia, during the division of which, the patient complained of more pain than in all the other stages of the operation. It appeared to me to be a remarkable circumstance that he evinced no pain when the *portio dura* was dissected up, although since Dr. McClellan has explained Mr. Charles Bell's new doctrine of the nerves, to me, the cause is obvious. The total paralysis of the muscles on that side of the face and head* which was immediately discoverable after the tumor had been thus removed, also astonished me not a little, although I now perfectly understand the rationale of that circumstance.

On examining the cavity of the wound, the cartilaginous tube of the ear was found to be exposed down to the auditory process of the temporal bone, and the ligament which ties it to that process was partially divided, so as to give egress to a quantity of blood through the external ear. The articulation of the jaw was partly exposed, so that the interarticular cartilage could be seen behind and above the condyle, on

* The auricular muscles, the right half of the occipito-frontalis, the corrugator supercilii, the orbicularis palpebrarum, and all the muscles of the nose, cheeks, and lips, of the right side, were totally paralyzed. The levator palpebræ superioris, the muscles of the eyeball, and the muscles of mastication, remained uninjured.

every motion of the joint. The depth of the wound was very great, full two inches and a half from the angle of the jaw towards the posterior fauces, and top of the pharynx. Not a single granule or particle of the gland was left behind. Of this fact we formed a satisfactory opinion, inasmuch as the whole of the exposed surface was left clear and dry, after the cessation of the hemorrhage, and could be thoroughly examined by the eye, as well as by the touch.

After having dissected away several diseased lymphatic glands, in the form of small black tubercles, from behind the *sterno-mastoideus*, we dressed the wound with dry lint and adhesive straps, over which was applied a compress and head bandage. The patient was then carried to his bed, having borne the operation with amazing fortitude, and in a sitting posture.

I remained five days and nights with my brother, after the operation, during which time I found occasion to administer no other medicine than a simple effervescing mixture, and a few doses of antimonial solution. The bowels were kept open by injections, and the febrile heat was reduced, when the symptomatic fever came on, by ablutions with cold water. No other unfavorable symptoms occurred than a great difficulty of deglutition, and violent pains in the head, which I succeeded in mitigating by the steady application of ice and ice water. In the course of a few weeks after I had returned to Pottsville, I had the pleasure of hearing that our patient had perfectly recovered from the operation, and was actively engaged about his usual business, in his coach manufactory.

It is now eight months since the operation. He is in the enjoyment of perfect health, experiencing no other inconvenience, than such as must necessarily result from a deep sunken scar, behind the jaw, which impedes deglutition to some extent, and a total muscular paralysis of the same side of the countenance, which has been produced by the loss of the *portio dura* nerve. He cannot close the eyelids of that side, nor can he laugh without producing excessive distortion towards the opposite side; but his sensibilities are all perfect, both in the eye and over the countenance.

The entire parotid gland has therefore been successfully extirpated, for the second time, on this side of the Atlantic. This operation affords another instance of the skill and intrepidity of American surgeons, and may be placed on a parallel with any that have been recorded in the annals of surgery.

Should any medical gentleman desire to see the patient, I would most respectfully invite them to call on my brother,

Mr. Charles Sorber, opposite the falls of the Schuylkill, on the ridge turnpike, four miles from the city of Philadelphia. The tumor has been deposited in the museum of Jefferson College, where it can be examined at any time by those who may desire to receive further satisfaction than I have been able to afford in this detail.

Philadelphia, Dec. 22, 1829.

[The first successful operation for the removal of the parotid gland, was likewise performed in this country, by Dr. McClellan. Its subject was Dr. Graham, now of this city, who has since visited Europe, and satisfied Abernethy, Astley Cooper, and other distinguished surgeons, of the fact of his parotid gland having been removed. A record of the case will be found in the third volume of the *American Medical Review and Journal of Philadelphia*. We state the fact in this place, because the very possibility of the operation has been denied by high authority.—ED.]

REVIEW.

ART. I. *Treatise on the Scrofulous Disease.* By C. W. HUFELAND, Physician to the King of Prussia. Translated by C. D. MEIGS, M. D., of Philadelphia.

THE pathology of scrofula is yet but imperfectly understood. And there is no class of diseases, the treatment of which is so generally empirical and unsuccessful. In this country the *king's evil* seems to be the standing opprobrium of physicians, and considered the peculiar province of quacks and seventh sons. Is scrofula, however, a disease beyond the reach of remedial agents? Both experience and observation prove that it is not, and the physician who demonstrates that it can be met and vanquished on ascertained general pathological principles, will hand down his name to posterity as a benefactor of the human family. We are not sanguine in the belief that the author, whose name stands at the head of this article, has fully accomplished this; but we do believe that he has done much to clear away the rubbish, and lay a foundation on which future pathologists may safely build.

On the pathology Hufeland remarks, that "In the flourishing days of humoralism, the importance of the humors was exaggerated, and mention was scarcely made of the solids; but now, when the doctrine of sensibility predominates, the contrary takes place. Truth rejects both extremes.

"The scrofulous disease may be produced by an alteration of the lymphatic system itself, and by a change in the fluid it contains. I divide the remote causes of this affection into three classes.

"1st. The first class embraces everything that may effect

a diminution of tone in the solids, and particularly in those of the lymphatic system.

“2d. The second comprehends whatever may exalt the irritability of this system, or blunt its sensibility.

“3d. I arrange in the third everything that occasions the formation of chyle or lymph, of a bad quality, such as unwholesome air, any derangement in the offices of nutrition, or the functions of the skin and lungs.

“But it is time to explain the particular causes of the disease under consideration. They are commonly divided into predisposing and occasional; a division that is not very precise. In fact, the predisposing causes do not tend merely to the development of a scrofulous taint; they give birth to the disease with all its characteristic symptoms, provided they act for a sufficiently long period of time: and, on the other hand, the occasional causes are restricted merely to facilitating the development of the scrofulous disposition, but have no influence in its production. I propose to name the first, *essential* or *principal causes*, and the others, *exciting causes*.”

Among the predisposing causes are ranked, “Hereditary tendency, sex and age, weakness of the parents, syphilis of parents, unwholesome aliment, unwholesome air, weakness of the digestive powers, acidities in the primæ viæ, intestinal worms, abuse of opium and other narcotics, want of exercise, want of cleanliness, abuse of heat, precocious studies, onanism, depressing passions, and the abuse of cold.”

We quote the following observations on artificial lactation, because we consider the evil a growing one in this country, and one, the importance of which is not sufficiently considered.

“Nothing is more injurious to the health than artificial suckling. I have almost always found that children brought up in this way, were more or less exposed to the scrofulous disease. Of all the fluids of the body, none is more endowed with vitality than milk. This is proved by the almost instantaneous influence experienced by moral affections on the mixture and intimate combination of its constituent principles. In this respect milk may be compared to the seminal fluid: it is certainly not a matter of indifference in the design of generation, whether the sperm shall pass directly from one living body to another, or whether it shall be transmitted to the latter some time after having left the former. Milk is vital while enclosed in its secretory organs, and the vital principle which animates it, while it appropriates it to the infantile constitution, renders it, at the same time, more nutritious and more digestible. Compare children that are nourished at the maternal breast, with those that are artificially brought up, and you will see that, gene-

rally, while the former are fat, fresh looking, and healthy, the latter remain weak and languid, at least during the first year of their existence."

In a short time after an animal fluid is exposed to the air, the laws of chemistry supersede the laws of vitality, and material changes take place. In the blood and urine this change is obvious to the senses, and the separation of the oily matter from the milk, shows that an equally important alteration is effected in this fluid. Hence we regard sucking as a process intended by nature to keep up, for a time, a direct communication between the mother and child, and to furnish it with nutriment suited to the delicate constitution of its organs.

The occasional or exciting causes of scrofula, are considered by Hufeland to be, "1st, *Development of the body, or growth*. 2d, *The senses*. 3d, *Mechanical causes*. 4th, *Diseases of irritation*." The proximate cause he thinks consists in a "profound atony, accompanied with a specific irritation of the lymphatic system, and in a peculiar alteration of the lymph." He considers the solids as the principal seat of the "*scrofulous taint*," and hence, that it is capable of hereditary transmission, from a peculiar modification of the same.

Chap. 3d treats on the proximate cause of scrofula. This is said to constitute a "profound atony, accompanied with a specific irritation of the lymphatic system, and a peculiar alteration of the lymph." That the primitive seat of this disease is in the solids, Hufeland thinks is shown by the fact that hereditary affections necessarily consist in a modification of the solids, and that as the strength of the system depends on a proper tone of the animal fibres, an affection that depends on a weakness in the parents, must also arise from a want of energy in the solids. Though the causes which produce the scrofulous *taint* are said to act on the solids, principally, yet he believes there is great weakness of the lymphatic system, attended with great *irritation*, and a deterioration of the lymph. That scrofula is a disease of debility, is shown by the fact that scrofulous children generally have weak parents—that the disease attacks that age and sex where debility predominates—that the predisposing causes are debilitating—that the symptoms denote weakness, and that tonics prove the most successful remedies. Hufeland believes that there exists at the same time a state of *irritation*, and that this is proved by the nature of some of the occasional causes, by the scrofulous diathesis being exci-

ted to action by irritations of the lymphatic system, and lastly, from the symptoms, and the fact that antiphlogistics palliate, though they do not eradicate, the disease. We believe that it is well established at the present day, that scrofula is characterized throughout by diminished irritability, and hence we may be permitted to doubt the existence of any specific virus of an acrimonious quality. We know very well that debility and irritability generally progress "passibus æquis," in atonic diseases, but in scrofula we see no reason to believe this to be the case. Inirritability of the vessels may cause obstruction, this may induce inflammation, and increased sensation may be the result. Indeed, it may be said that the diseases which are caused by irritation, frequently originate from the want of it, for those which are immediately owing to the excess of it, as the hot fits of fever, are generally occasioned by accumulation of sensorial power, in consequence of a previous defect of irritation, as in the preceding cold fits of fever. The same remark may be applied to the disease under consideration.

"The etiology of the scrofulous taint is a subject full of errors. Because its proximate cause resides in the lymphatic system, it is pretended we ought to seek its occasional causes in the solids; consequently, no account whatever is taken of the fluids, whose influence is nevertheless immense. I cannot sufficiently repeat, that to estimate correctly the condition of every system of organs, we must take into consideration both the system itself, and the fluid which circulates in it, for this influence is reciprocal. But if this rule is of general applicability, we ought *a fortiori* to conform to it, when judging of a system which draws the greater part of its materials from without the body, and in the alimentary canal; materials that are far from having acquired the degree of elaboration necessary to fit them to be identified with our organs. The fluids, therefore, determine, 1st, The tone and degree of cohesion of the solids, and particularly those of the lymphatic system. 2d, The fluids are the natural stimuli of the vessels; in other words, the vessels only act in consequence of irritation produced by the humors they contain, and there is a mutual relation between the sensibility of the vessels and the impression which the fluids make on them. In fact, the energy of the organs is always proportioned to the impression of the humors. If the blood is not sufficiently irritated, the circulation languishes: if the lymph produces an insufficient impression, its movement diminishes, and hence we have congestions, engorgements, &c. If, on the contrary, these fluids are too irritating, both the sanguineous and lymphatic vessels redouble their movements, and the circulation becomes deranged. 3d, As the humors antagonize the pressure of the vessels, the force of the latter must be estimated by the mass of fluids they are destined to move. If, then, the fluids exercise so great an influence on the organs, is it any matter of as-

tonishment that the lymph may change the condition of the lymphatic system? The scrofulous diathesis is therefore produced by lymph that is too viscid, too thin, too irritating, or lastly, in too large a quantity. The composition of the lymph may also be altered by the quality of the aliment, the state of the digestive powers, the qualities of the air, the state of the cutaneous and pulmonary functions, and the state of the secretions and nutrition."

Chapters 4th and 5th, treat of the origin and nature of the scrofulous acrimony. We have not space to enter into a discussion of the claims of the Humoral Pathology, but when we find such men as Hufeland supporters of its doctrines, we ought, at least, to pause, before we give our unqualified condemnations. It has lately been the fashion with some half fledged pathologists of the modern school, to ridicule the pathology of the humors; but the more we learn of the animal economy, the more are we convinced that a knowledge of the changes which occur in the animal fluids, is of equal importance with those detected in the solids. Let no one deceive himself with the idea that a tolerable acquaintance with the alteration of structure, effected by disease, will enable him to cut the Gordian knot, and become the arbiter of life and death. By no means: he is, as yet, scarcely initiated in the fundamental rudiments of the science. He sees *effects* which he blindly mistakes for *causes*, and thus, with an air of wisdom, sits down wrapped in a sevenfold panoply of conceit and ignorance. Instead, then, of magnifying the influence of sympathy, or directing all his attention to the various shades of post mortem appearances, let the pathologist investigate, as a matter of equal importance, the chemistry of healthy and diseased animal fluids.

"If it be true, as, indeed, it cannot be doubted, that all the fluids of the human body are specific stimuli, that is, if they enjoy the faculty of producing impressions that are relative to the sensibility of the vessels which contain them, it will doubtless be admitted that this faculty is susceptible of being either augmented or diminished. Now its augmentation is what I call *acrimony*. In other words, when any humor is more stimulating than it is in its natural state, there is acrimony of that humor.

"This acrimony may depend,

"1st. On an increase of irritating molecules introduced into the body, either with the climate, or by means of cutaneous absorption.

"2d. On decomposition of the parts, resulting either from chemical affinity, or from a diminution of the vital forces.

"3d. On bad assimilation.

"4th. On suppression or alteration of the secretions and excretions.

"5th. On excess or deficiency of vascular movements.

“The effects of this vicious state of the lymphatic system are the following.

“1st. Stagnation of the lymph.

“2d. Vicious accumulations of lymph in a cavity.

“3d. Irregularity in the course of the lymph.

“4th. Alterations of the lymph.

“From this view, scrofula consists of the twofold alteration of solids and humors. The latter, by their action, increase the irritation of the vessels, the disease which was local becomes general, the acrimony pervades every part with the lymph, and this scrofulous disease is propagated from point to point, until it involves even those tissues which are least abundantly furnished with lymphatic vessels. Metastases take place. Scrofulous phthisis, for example, is much oftener the result of a metastatic translation of the scrofulous taint to the pulmonary organs, than of a primary affection of them.”

Of the nature of scrofulous acrimony, we have no better means of judging than from its effects. Chemistry, instead of enlightening us here, would only lead us into error. It may disclose to us *effects*, but a rational treatment must be founded on a knowledge of *causes*. We may by chemical analysis detect an acid or an alkali, but the question then occurs, whence is it derived? Is it a new product, or did it exist in a combined state in the body? Until these questions are solved, the physician who prescribes upon chemical principles, practices nothing, after all, but symptomatic medicine, and is guided solely by a supposition which is as likely to prove false as true. We trust we do not undervalue the correlative sciences, but we deprecate that analogical reasoning, which jumps from *dead* to *living matter*. *Life* is the domain of the physician. Its laws can neither be imitated nor detected by the manipulations of art. His study is the influence of inorganic substances on organized beings, and however well acquainted he may be with the ultimate elements of the medicines he prescribes, he cannot tell “*a priori*,” what will be their effects on the human body. The effects of the scrofulous acrimony, according to Hufeland, are the following.

“1. It irritates not only the lymphatic system, but the nerves also; witness the spasms and convulsions to which scrofulous subjects are liable. By mixing with the blood it also irritates the vascular system. I have seen scrofulous children that were pale, poor, and wasted; febrile attacks succeeded this state, and these attacks being followed by eruptions on the head, the children rapidly recovered their health. In an advanced period of the disease, the scrofulous acrimony acquires sometimes such a degree of causticity as to corrode the bones, and produce ulcers of the worst character.

"2. The lymph acquires a manifest tendency to become inspissated. This is often observed on dissection about the joints, in the thyroid gland, the lungs, the mesentery, the ligaments of the spine, and bodies of the vertebræ and ribs, producing various degrees of curvature and deformity.

"3. The lymph loses its nutritive property.

"4. It contracts a tendency to acidity. Acidities of the primæ viæ are sometimes causes of the scrofulous diathesis, and sometimes the effect of it.

"5. Arrived at its highest degree, the scrofulous blemish is frequently associated with a putrid condition, characterized by colligative sweats and stools, oft repeated hemorrhages, ulcers of a vinan color, and other symptoms of the same kind.

"6. I believe that at this period the *scrofulous disease may become contagious*. There are diseases which may become contagious, although not themselves originating from contagion. Such is the case with dysentery, accidental phthisis, miliary fever, *gout*, and other diseases. Thus a contagious principle may be evolved in the scrofulous diathesis, which, though not volatile, may yet be communicated by immediate contact. In proof of this opinion, cases are cited by Weber, Lalouette, Bordeur, Langham, and Brouzet."

SECTION II.—This section is taken up with a description of the scrofulous disease. To facilitate the diagnosis, it is divided into three periods; in the first it is considered as latent; in the second, manifesting itself by all its characteristic symptoms; and in the last, tending to disorganization.

"*First Stage*.—The disposition of any individual to this disease, will necessarily be proportioned to the causes that may have acted on him. There is a habit or appearance of the body, which I call the *scrofulous physiognomy*, very characteristic of the disease. Its features are, 1st, a short thick neck; 2d, the jaws rather stronger and broader than natural; 3d, head rather large in proportion to the body; 4th, light colored hair; 5th, face slightly bloated—skin delicate, transparent, white, somewhat rosy; 6th, upper lip rather thick—a symptom that does not often mislead us; 7th, the nose is often a little swelled, red, and shining; 8th, the whole body appears to be fat and well nourished; but on a close examination, the flesh is found to be flabby and soft; 9th, the belly is somewhat larger than it ought to be, though not as hard as it generally becomes in the latter part of the disease.

"Among other indications of the scrofulous diathesis, is an irregular development of the organs. While the development of the teeth, bones, and muscles, learning to walk, and to talk, are either difficult, backward, or succeed each other in an irregular manner, the intellectual faculties, and those of the generative organs, are, on the contrary, most commonly, very precocious. The digestive powers are apt to be disordered, attended with acidity, variable stools, irregular appetite, worms, flatulent distention, spasms, and colic.

Most of the fevers of children, known by the names of gastric fever, inward fever, mesenteric fever, and fever of dentition, are nothing more than the precursory signs of the scrofulous diathesis.

“*Second Stage.—Symptoms.* The first and most common of all, is swellings of the lymphatic glands. At first they are small, moveable under the finger, elastic, not painful, and without any discoloration of the skin. Those on the side and back part of the neck are commonly the first to feel the influence of the scrofulous taint. After these, the axillary glands begin to swell in their turn, then those of the groin, and in some instances, those of the whole body. *Scrofulous swellings may be distinguished from all others, by a peculiar feeling of elasticity.* In time they grow hard and less moveable. Sometimes they remain indolent, at other times redden and inflame, and afterwards suppurate. The pus is always of a bad quality, and does not resemble that of a common phlegmonous abscess. In the internal parts of the body, scrofulous glands are often met with in the mesentery, occasioning that form of consumption called *marasmus*; also, in the liver and spleen, and sometimes in the brain. Next to the mesentery, however, the *lungs* are more subject to scrofulous swellings than any other organ. These are denominated *tubercles*, and constitute the real cause of *scrofulous consumption*. 2d, The second class of characteristic symptoms are cutaneous eruptions of different kinds, particularly about the head. 3d, Inflammations in organs which contain a great many glands. 4th, Mucous discharges; as from the nose, ears, eyes, and digestive passages. 5th, Swelling and hardness of the belly, occasioned by a swelling of the mesenteric glands. 6th, Scrofulous ulcers. 7th, Lymphatic swellings. 8th, Goitre.

“*Third Stage.*—The third stage embraces, in the first place, those cases in which the scrofulous disease passes from its primary seat in the lymphatic system, into the other tissues, in consequence of which, it is not of easy recognition; and secondly, those in which it attacks such organs as are essential to life, and whose disorganization menaces the near approach of death.

“1. *Mesenteric Atrophy, (Marasmus.)* In proportion as the mesenteric glands become tumefied and engorged, the elaboration of nutritive principles becomes more and more imperfect; by and by they suspend their course, and remain in the lymphatics, instead of proceeding into the general circulation, and from thence to all parts of the body, whose waste they were designed to repair. Such is the case in *marasmus*, an affection characterized by the great size and hardness of the belly, and the wasting of the lower extremities.”

As there are no cases reported by Hufeland to illustrate the progress of this common, and, for the most part, fatal affection, we have thought that the following case, which we copy from our private note book, might prove interesting to many of our readers.

Case. Mary C., born from scrofulous parents, on the mother's side, at the age of four or five years, had swellings

on her neck, and showed an inability of walking, and of performing the natural motions of flexion, and of extension of the foot and toes. The first untoward symptom discovered, was a lopping of the toes on putting on her shoes, and an inability to raise or extend them. About this period she experienced distressing turns of vomiting, with great difficulty of breathing. These symptoms were attributed to worms, and vermifuge medicines were accordingly administered, without, however, producing any beneficial result. The general health was in the mean time tolerably good. Soon, however, the limbs ceased to grow—they became cold, and of a purplish hue, and the muscles both of the upper and lower extremities gradually wasted away. Her trunk continued straight, and she complained of no pain or uneasiness in the course of the spine. All these symptoms gradually increased, till, at the age of twelve or fourteen, her hands became cold, attended with a great degree of numbness and loss of muscular power. Her health was by this time considerably impaired. The abdomen was full and tense, accompanied with a sense of tightness from one os ilium to the other. She occasionally experienced pain, together with an indescribable feeling of distress, though she appeared *plump*, like one who ate heartily, and enjoyed good health. The bowels at this period were inclined to costiveness. The catamenia made their appearance at the age of fourteen, and continued regular till October, 1828, though the discharges were always preternaturally thick and dark colored. At this time, having arrived at the age of sixteen, during the catamenial flow, she was exposed to cold, and a suppression of the menses followed. On the night succeeding, she was attacked with a numbness in the left hypochondriac region, which extended itself in a short time over the whole of that side, including both upper and lower extremities. These symptoms were never removed, and the limbs of the left side continued weaker than those of the right. Previous to this, she had for some time been disposed to assume a stooping posture as she walked, but now her inclination forwards was still greater, and her health continued to decline. In January her menses reappeared, and continued regular till the month of June ensuing, when she was attacked with measles. The efflorescence was a long time in making its appearance, and, for several days, was coming out and receding, alternately. At length symptoms of confirmed hectic appeared, with congestion of the lungs, and complete paralysis of the lower extremities. The treatment during her illness, which lasted till the 25th of June, need not be detailed.

Autopsy thirty-six hours after death. On laying open the abdomen, the whole of its contents exhibited a peculiar appearance. The peritoneum and external coat of the intestines showed an inflamed and granular surface. The granulations were about the size of wheat kernels, of a reddish color, and completely studded over the whole surface of the peritoneum, intestines, mesentery, stomach, and liver. The peritoneum was much thickened, and its cavity contained about a pint of gelatinous fluid. Considerable coagulable lymph was found in the pelvis and abdomen: no mark of disease could be found in any of the vertibræ, or in the mucous membrane of the bowels. The mucous membrane of the stomach showed only one or two diminutive patches of inflammation.

We proceed with the diseases in the third stage.

“2d. White swellings of the joints. 3d, Spontaneous luxation: owing to an accumulation of serosity or pus in the cavity of the joint, displacing the head of the femur from the socket. 4th, Scrofulous dropsies. 5th, Tubercular consumption. 6th, Changes in the bones. 7th, Cancer. 8th, Abdominal consumption. 9th, Rachitis. 10th, Nervous affections. 11th, Cretinism.”

Our limits do not allow much space to quotations on these subjects.

The prognosis of scrofula is in many cases uncertain; while in the third stage, above described, it is almost uniformly unfavorable. It is an affection proper to childhood; after appearing in the first year, in the form of glandular enlargements, in the second and third attacking the mesentery, and at the period of puberty, falling on the lungs. When its external symptoms disappear, either spontaneously, or by the inconsiderate application of remedies, while the diathesis yet remains, we have great reason to expect that some internal organ will become the seat of the disease, and that the patient will fall a victim to phthisis, marasmus, hydrocephalus, or ascites. Hufeland remarks that those children who at an early period have had *tinea*, *crusta lactea*, or other analogous eruptions, are commonly exempted from the internal ravages of scrofula, and subsequently enjoy a good state of health.

SECTION III.—*Treatment.* We remarked in the beginning of this article, that the treatment of scrofula was for the most part empirical. Innumerable changes have been rung on the whole class of mineral and vegetable tonics, and still the *modus medendi* stands where Hippocrates left it. Celsus remarks, “*Struma quoque est tumor, in quo subter concreta*

quaedam ex pure et sanguine quasi glandulae oviuntur: *quæ vel præcipue fatigare medicos solent.*" Our readers, we presume, will deem this no less applicable in the present age. That the ancients also dealt in popular specifics, in this disease, is evident from what follows: "Quæ cum medici doceant, quorundam rusticorum experimento cagnitum, quem struma male habet, *cum, si anguem edit, liberari.*"

The following indications are regarded by Hufeland as the most important in the treatment of this disease.

1. The patient should be removed from the causes of the scrofulous diathesis.

2. The alimentary canal must be kept free from acidities, mucous saburræ, and costiveness, as these, through the effect of the scrofulous taint, react on, and thus aggravate, the cause which produces them. Previously to resorting to antiscrofulous remedies, it is necessary to prepare the body by absorbents, resolvents, anthelmintics, or evacnants, according to the nature of the case. It is even necessary, at times, to recur to these preparatory means, in order, if we may so express it, that the primæ viæ may be brought into a condition to *digest the remedies.*

3. To elevate the tone of the constitution, and especially that of the lymphatic system. This is the grand indication, and the basis of the whole treatment. And here we are to remember that good food and wholesome air, are no less useful than pharmaceutical remedies.

4. The functions of the lymphatic system must be regulated and reanimated by allaying the irritation of which it is the seat. For this purpose revulsives are indicated, from the property which they possess of distributing equally over the whole body, forces which have been unequally divided among the organs. Such are tepid baths, antimonials, mercurials, cicuta, bittersweet, barytes, lime, opium, and guaiacum.

5. Wholesome aliments, that are rich in nutritive principles, a pure dry air, light, and sunshine.

We are to commence our treatment with those means which seem to have a special action on the lymphatic system, such as mercurials, antimonials, resolvent plants, &c. After the resolution of the glands, and the cicatrization of the cutaneous ulcers, if there are no symptoms of inflammations, we pass on to the use of the fixed tonics; *acorn coffee*, is, however, recommended to be employed from the commencement. We are always to enquire whether the disease is accompanied with irritation or asthenia, for though the latter usually predominates, Hufeland guards us against the administration of tonics, except in the absence of irritation.

All experience goes to prove the truth of the following observations. When the scrofulous taint is of ancient date, and has struck its root deeply into the constitution, it is from time only, that a radical cure can be hoped for. A majority of cures that we hear proclaimed under such circumstances, are merely *cures of symptoms*. If resolution of the engorged glands take place, and the cutaneous eruptions disappear, the patient is said to be cured. But be not deceived: the principle of the malady still exists, and sooner or later, new symptoms, leaving no doubt as to their nature, will be manifested. To prevent relapses, recourse must occasionally be had to the *special means*, and particularly to the mercurial and antimonial preparations, remembering that their use is to be persisted in until the complete, or almost complete, extinction of the symptoms. In the intervals, an occasional use must be made of tonics, combined with resolvents. Finally, if everything goes on favorably, we may suspend for one month the use of all medicines, except the dietetic means, such as baths, and acorn coffee, which are always indicated. By following up this method, we may hope completely to destroy the scrofulous diathesis in the space of one year.

We have often noticed many bad effects result from the use of local treatment, without at the same time employing constitutional means. Most physicians readily grant that chronic ulcers are not safely treated, without substituting some other discharge. And it is no less true that glandular engorgements are not safely discussed, without using means to preserve the internal organs from attack. On this point Hufeland observes,

“ We break up the habits of nature when we suddenly disperse, by means of topical applications, long standing local affections, and it is not rare for her to concentrate herself in the interior of the body, and produce engorgements, suppurations, in a word, new productions, as if to indemnify herself from those which we have removed from her grasp. This is a thing I have often seen after the sudden retrocession of a cutaneous eruption, an ophthalmia, and even after surgical operations. Thus, the amputation of the mammary gland is followed by scirrhus of the lungs. I trust these facts will convince surgeons of the necessity there is of first destroying the scrofulous diathesis, before they remove its local symptoms by the knife, and of establishing issues after the operation, as if to indemnify nature.”

CHAP. I.—*Dietetic Treatment*.—1. *Aliments*. The food should be light, easy of digestion, and incapable of producing acidities, or weakening the stomach. Vegetables ought

to be combined with animal substances. Fresh vegetables, broths made of herbs, and lean meats, are the most suitable aliments. For drink, small beer, the yolks of eggs beat up with water and a little sugar, soda, and other mineral waters may be used.

2. *Atmospheric air.* This should be pure and dry: nothing is more favorable to the development of this disease than damp, unventilated rooms into which many children are crowded; cleanliness is no less necessary than good air.

3. *Exercise.* Without exercise it is impossible to cure the scrofulous diathesis. Children that spend much time at play, in the air, are rarely affected with it.

4. *Frictions.* These, like exercise, strengthen the body, stimulate the capillary vessels and secretory organs, and resolve glandular swellings, by promoting the circulation of the lymph. A piece of flannel or a flesh brush may be used.

5. *Attention to cleanliness.* This cannot be too highly enjoined, either as a preventive or cure of scrofula. Besides washing the whole body, daily, with fresh water, one or two tepid baths should be used every week, and the body linen often changed. Scrofulous children should always sleep on matrasses: feather beds cannot be changed often enough; besides, they absorb the bodily secretions, excite heat and perspiration, and, by relaxing the system, weaken the whole constitution.

6. *Warm baths.* The value of these cannot be too highly estimated. They cleanse the skin, facilitate absorption and exhalation, equalize the circulation, allay irritation, and regulate the functions of the lymphatic system. They likewise prevent metastases, and constitute a useful vehicle by which remedies may be introduced.

CHAP. II.—*Pharmaceutical Treatment.*—The following rules will be found of much importance in the treatment of this disease.

1. Lay in a good stock of patience, for it will probably all be wanted before you accomplish a cure.

2. Learn the art of temporizing; or, at any rate, throw no obstacles in the way of nature, for time may effect a cure, at length, without your assistance.

3. Remember that spring is the most favorable season for combating the scrofulous diathesis.

4. Never mistake the suppression of glandular tumors, and of other local affections, for the cure of scrofula. These are merely the *external symptoms* of an internal disease.

5. Believe not in the existence of a specific remedy for the disease, for none such exists.

6. Vary occasionally the curative means, in order to obviate the inconveniences arising from habit.

7. Do not forget that the lymphatic system is the primitive seat of the scrofulous affection, and therefore use every means to rouse the absorbent functions.

1. *Emetics.* It is the practice of Hufeland to commence the treatment of scrofulous swellings by emetics, because they not only excite absorption, and agitate the lymphatic system, but cleanse the first passages, and prepare the way for other remedies. Antimony and ipecac., with oxymel of squills, are usually given.

2. *Purgatives.* These should be chosen from the drastic kind, such as jalap, aloes, scammany, rhubarb, muriate of ammonia, &c. Of these, *julap* is the best, and it may be given with the greatest advantage, to children of every age. Resinous substances, given in small doses, combined with bitter extracts, are very suitable in cases where the bowels are torpid, and the impression they produce counteracts the debility they would seem to occasion. *Aloes* is another important medicine in the treatment of scrofula. In many cases there is no substitute for it. It has a special action on the liver, increasing the flow of bile, and it often succeeds in curing anorexia, chronic vomitings, and flatulent affections dependent on weakness. It is adapted to the second stage of scrofula, and should be given in small doses, occasionally augmented, and accompanied with other purgatives. The following is the formula of the scrofulous elixer, employed extensively by Hufeland, in the Institut Polyclinique of Berlin.

Z. Carb. potass., ℥j.
 Water, ℥xviiij.
 Aloes.
 Myrrh.
 Resin of guaiac.
 Rhubarb, aaaa. ℥ss.
 Saffron, ℥ij.
 M.

3. *Antimony.* This fulfils all the indications in scrofula, except restoring that tone to the constitution which it has lost. It destroys the irritation of the lymphatic system, resolves engorgements, corrects faults of the secretions, favors the resorption of effused fluids, and, in short, is one of the most powerful resources of Therapeutics against the scrofulous diathesis. It is never more efficacious than when the functions of the skin are not properly performed. In de-

bilitated cases, however, it is to be given with caution, and combined with tonics. Where there is much irritability of the stomach, weak digestion, or colliquative sweats, antimony, in substance, is the best form. In other cases ant. wine, and the salts of ant., are to be used.

“*Case.* A little girl, born of scrofulous parents, had presented in her infancy unequivocal symptoms of the scrofulous diathesis: she still had swelled glands on her neck, and eruptions on the arms and face. The eruption was dry, scaly, and sometimes resembled tinea. A great variety of means, both internal and external, had already been made use of, without any success. I first prescribed a mixture of Plummer’s powder, bittersweet, and mezereon, but I was not more successful than the physicians who preceded me. I then ordered antimony, in substance, in doses of a scruple, three times a day, with an absorbent powder, and a little sugar and canella. This done, I gradually augmented the dose, until the patient took ℥ss. of ant. every day; her drink was a decoction of bittersweet, and for external application, some sulphurous baths. This treatment was soon followed by a favorable change, and the cure was completed in about six weeks.”

4. *Mercury.* This is one of the oldest and most efficacious articles in the treatment of scrofula. As to its *modus operandi*, it is believed to excite an irritation which neutralizes that of scrofula, and thus destroys it. It augments the absorption and secretion of the glands, and thus resolves scrofulous tumors. Mercury may be given with advantage in nearly all the forms of scrofula, particularly in cutaneous eruptions, engorgements, lymphatic infiltrations, chronic phlegmasiæ, ophthalmias, and nervous affections, dependent on the scrofulous taint. It must be given with caution, to patients disposed to phthisis, scurvy, or weakness of the alimentary canal, likewise to those subject to abundant hemorrhages. In the last stage of scrofula, mercury is contraindicated, especially if a slow fever is present. Salivation should not be induced, if possible to prevent it, except where obstinate swellings exist, or chronic nervous affections produced by the disease. It is to be associated with narcotics and tonics, and alternated with them, according as circumstances require. It is sometimes necessary, as in syphilis, to continue the use of it after the symptoms have disappeared. Its external use is often preferable to the internal, especially where there is great irritability of the alimentary canal. Its preparations should be varied accordingly. Plenck’s pills, and Ethiop’s mineral, are particularly useful. The latter can be given to children of three years, in two gr. doses, twice a day, with a little cicuta, magnesia, and sugar.

“*Case.* A little girl, five years old, was affected with a complete mesenteric atrophy, and scrofulous ophthalmia. She took every evening a powder composed of one gr. of calomel, and twelve grs. of flowers of sulphur and sugar; her drink was a decoction of guaiac. and bark, and she had occasionally a purgative. In three weeks there was not a trace of either ophthalmia or marasmus.”

5. *Muriate of baryta.* This answers nearly the same indications as antimony, and is particularly recommended in scrofulous affections of the lungs, and may be given in doses of from ten to fifty drops of a solution, made by dissolving half a drachm in an ounce of distilled water. The following preparation is much employed by our author.

Muriate of baryta.

Mur. of iron, aa. ʒss.

Distilled water.

Syrup of orange peel, aa. ʒj.

M. Dose from 20 to 30 drops, every three hours.

6. *Muriate of lime.*

“*Case.* A child, six years old, had been afflicted for a long time with a hardness of the cervical glands. I directed for it thirty drops of a solution of muriate of lime, to one ounce of distilled water; the dose was repeated every third hour. The medicine produced fluid stools every day, and manifestly increased both the perspiration and the urine. In a fortnight both the size and consistence of the cervical glands were considerably diminished.”

7. *Bark and other astringent tonics.* These are highly useful in combating scrofula. The best form is the quinine. It may be combined with aromatics, or deobstruents, as the case requires.

“*Case.* A child two years old, and evidently rickety, had several swelled glands; the belly was somewhat tumid; he could not stand on his feet, and his whole appearance announced a great degree of debility. I prescribed a mixture of one drachm of carb. potassa, dissolved in ʒj. vinegar, and half an ounce of tinct. of rhubarb, and as much syrup. The patient took two spoonfuls of this mixture every day, and employed frictions over the abdomen, with flannels impregnated with aromatic vapors. This plan producing no good effect, I substituted for it a decoction of madder, with an addition of salt of tartar. A diarrhea now came on, which exhausted his strength, and the disease increased in violence every day. Suddenly the ends of the bones began to swell, the abdomen grew larger, and the scrofulous tumors increased in number. Such was the deplorable state of this little patient, when I prescribed an infusion of one ounce of cinchona, ʒij. of orange peel, ʒj. of mace,

in a pint of mild wine, an infusion of which he took half a spoonful three times a day, and at the same time had his body washed all over with cold water. This new treatment was soon followed by evident improvement. In a few weeks the patient became lively, could walk about, and the swellings of the abdomen and bones were lessened. The persevering use of the cinchona and cicuta, completed the cure."

8. *Acorn coffee*. This article, hitherto but little known in this country, is highly extolled by Hufeland, as an excellent stomachic and tonic, combining great deobstruent and nutritious properties. The infusion of acorns is a favorite remedy with him, in mesenteric atrophy, incipient rachitis, glandular engorgements, asthma, and cough. "In several instances," he remarks, "I have continued its use for six months in succession, with a success so complete, that I have, without any other aid, been enabled to dissipate mesenteric obstructions of the worst character."

Under the articles ferruginous preparations and narcotics, are many most valuable practical remarks, the result of the experience of a long life, enthusiastically devoted to his profession. Of the therapeutical part of this work, we can hardly speak in higher terms than it deserves, and though our limits forbid a more extensive analysis of its contents, at present, we design in a future number to conclude our notice of this work, with particular reference to the appendix, which treats of distortions of the spine.

ART. II. *A Practical Synopsis of Cutaneous Diseases.*

From the most celebrated Authors, and particularly from Documents afforded by the Clinical Lectures of Dr. Biett, Physician to the Hospital of St. Louis, Paris. By A. CAZENAVE, M. D., &c., and H. E. SCHEDEL, M. D., &c. Translated from the French, with Notes. 8vo. pp. 400. Philadelphia, 1829.

"MALUM molestissimum, difficilis sanationis et quod mire torquere et fatigare solet et medicos et ægros," (Hoffman,) is not only applicable to one, but very many of the diseases of the skin. In the chronic species, how difficult do we often find the diagnosis! and when the real character has been made out, how difficult still the cure!

To one unacquainted with this subject, who has seen the splendid works of Willan, Bateman, and Alibert, in which not only each disease, but its almost endless varieties, are

so carefully portrayed, the dermoid affections must appear the simplest and most easy to be recognized, of all the long list of human maladies. Experience proves the reverse of this to be the fact. Every effort to assist us in discriminating or treating them, though successful but in part, is rendering the profession an important service.

Those who have frequented the wards of the hospital of St. Louis, must have been struck with the immensity of the field for observation and experiment, afforded by that vast receptacle of cutaneous diseases. Add to this a knowledge of the talents and industry of the individual who is at present its cultivator, M. Biett, and they must have been convinced that a valuable harvest would be the result of such combined labors and advantages. The practical synopsis under consideration, made up in a great measure from documents afforded by M. Biett's clinical lectures, contains also what has been added to our knowledge on this subject in France, and most of the improvements of the present day. In proceeding to analyze it, we have to remind our readers of the comparative difficulty of giving them a correct idea of the merits of a work on nearly fifty diseases, and a treatise on a single one of them, and that our object will not be so much to criticise, as to enable them to judge of its value themselves. In doing this, we shall make some extracts from the Introduction, and select such parts of the descriptions, treatment, &c., as appear to us most worthy of notice, occasionally adding such observations as our reading and experience may suggest.

Introduction.—"There are no diseases that have been, and still continue to be, involved in so much obscurity, as those which constitute cutaneous pathology. This appears the more extraordinary, as there is no part of the system whose phenomena are more readily observable, for they manifest themselves in characters constantly applicable to the sight, and moreover, are so frequent that they are every moment presented to the observation. But is it not this very frequency, and the facility with which their existence is verified, one great cause of the confusion which has reigned among this class of diseases? Here, as in many other parts of medicine, the multiplicity of facts has only tended to encumber the science. Can it be otherwise, when the same diseases, observed at different stages, are described as dissimilar affections, according to the classification to which they are subjected; classifications in themselves defective and vicious, or thrown together without order, or any attempt to groupe them.

“The want of classification, and latterly, their faultiness, have also contributed to throw much obscurity on the important study of diseases of the skin. Nevertheless, in the seventeenth, towards the end of the eighteenth, and commencement of the nineteenth century, several authors have attempted to collect and arrange the various forms under which these diseases appear; they have formed groupes of them, and somewhat enlightened this important branch of pathology. All these classifications may be reduced to three divisions.

“Mercuriali, 1623; Turner, 1736; Alibert, 1806. One to which Alibert has attached his name, of late years, was introduced by Mercuriali, and afterwards adopted by Turner. Its fundamental principle is to divide the diseases of the skin into two great groupes, as they manifest themselves on the head or body. But this learned professor, in adopting these distinctions, and giving the name of *teignes*, to eruptions of the head, and *dartres* to those of other parts, is not content with those primary divisions, he has created species and varieties, hence there was a necessity for distinctive characters. These he either found in the products of the inflammation, in its different states, or in differences of form, &c.

“This plan, vast as it is, has been skilfully followed up by this learned pathologist, but is far from being exempt from censure, and is not, perhaps, a certain guide in studying the cutaneous diseases. In fact, the reproach that has been cast on Mercuriali and Turner, for having separated identical diseases, because they had a different seat, is equally applicable to Alibert, as he has adopted their distinctions as the basis of his plan, and this attack is the better founded, as there is not, perhaps, a single eruption that has so special a seat, that it is never to be met with in other parts, and with similar characters.

“Notwithstanding these defects in classification, defects inherent in the subject, the work of Alibert is a precious and lasting monument, from the light it has contributed to shed on this class of diseases—from the energy of his style and the truth of his descriptions, and if we were to attempt to answer the censures bestowed on him by a foreign author, we should only point out the history he has given us of the *dartre rongeante*, of the *syphilides*, &c., which attest, in the highest degree, the merit of this learned pathologist.

“Another classification, on a different basis, was established by Plenck, in 1796, and perfected by Willan, in 1798. The first rejecting all topographical divisions, classed diseases of the skin by their external characters; but with the true

anatomical lesions, he arranged the products of inflammation, and among the fourteen classes he adopted are seven distinct sections, based on scabs and ulcers, ranged with those constituted of vesicles and pustules, as if these ulcers and scabs are not consecutive symptoms, and succeed pustules, &c. : the consequence was inevitable ; that of making two or three different affections from the same disease, according as it existed in a pustular, crustaceous, or ulcerous state.

“Willan adopted this groundwork, and established a classification, which, if not exempt from errors, is at least, in the actual condition of our knowledge, that which presents the most clearness, precision, and exactness, in the study of diseases of the skin.

“Retz, 1790 ; Derien, 1794 ; J. Franck, 1821. A third classification, which would present many advantages, if it were only applicable, is that of J. Franck, who following those of Retz and Derien, has divided diseases of the skin into acute and chronic. This distinction appears at the first view to be natural, and it seems proper to separate *rubeola* from *psoriasis*, *scabies* from *prurigo*, but on a closer inspection, it will be perceived that the plan is impracticable. How can we, in fact, divide a work into two parts, in one of which is given the description of a disease in an acute form, while the account of it, in a chronic condition, is contained in the other.

“J. Plumb, 1824. In the actual state of our knowledge, it is vain and illusory to attempt to arrange those numerous diseases by the causes which produce them. Mr. Plumb, who has adopted this classification, in a recent work, has rather added new obstacles to those already existing in this branch of pathology, if a work undertaken on such a plan can exercise any influence on the science.

“We have adopted, among these different methods, that which appeared to us as most favorable to the study of cutaneous diseases, and have selected that of Willan, with the modifications introduced by M. Biett. Wherever the classification of Alibert agrees with that of the English pathologist, we have endeavored to present both, and have always, at the head of each chapter, succinctly indicated the principal analogical divisions, admitted by the learned French author.

“We have classed the diseases of the skin, as may be seen by the following table, by their external characters and their elementary lesions, referring to as many different chapters those which it appeared to us could not be arranged in any of the eight principal orders.

“Orders in which the diseases of the skin are classed and described.

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| “ Order 1. | Exanthemata. | Erythema; erysipelas.
Roseola; rubeola.
Scarlatina; urticaria. |
| “ Order 2. | Vesiculæ. | Miliaria; varicella.
Eczema; herpes; scabies. |
| “ Order 3. | Bullæ. | Pemphigus; rupia. |
| “ Order 4. | Pustulæ. | Variola; vaccinia; ecthyma.
Impetigo; acnue; metagra.
Porrigo. |
| “ Order 5. | Papulæ. | Lichen; prurigo. |
| “ Order 6. | Squamæ. | Lepa; psoriasis.
Pytiriasis; ichthyosis. |
| “ Order 7. | Tuberculæ. | Elephantiasis græcorum,
Molluscum frambæsia. |
| “ Order 8. | Maculæ. | Discolorations.
Bronze color ephelis.
Nævus discolorations.
Albinism; vitiligo. |

“ Diseases which cannot from their nature be arranged with the above:—Lupus, pellagra, syphilitica, purpura, elephantiasis of the Arabs, diseases of the sebaceous follicles, and keloide.

“ The particular diagnosis of diseases of the skin, is that part of their study which demands the most care—it is connected with all other parts of their history, and without it no opinion can be formed as to the treatment. It is because it is generally wanting in almost all writers who have treated of these affections—it is because a multitude of eruptions are usually mingled in a confused mass, by designating them all under the regular name of tetter, without attaching any importance to their individuality, that we see a physician causing inquietude and trouble in a family, by declaring that such an eruption is itch, when it is *lichen*, or *prurigo*, or *eczema*; another in declaring that a disease is venereal, and exasperating it by giving mercurial preparations, when there is no trace of syphilis—this one permitting a venereal complaint, which he had mistaken, to continue its ravages—that one, again, using incisions and cauterizations, for some simple affection he had taken for a formidable disease, and which would have yielded to mild applications.

“ It is, therefore, of the highest importance, to pay strict attention to the diagnosis: moreover, in this resides the whole study of cutaneous affections.

“ The most important part is to ascertain the primary

elementary lesion, if it has not been destroyed or hidden, to a certain degree, by secondary alterations. This once attained, it only remains to compare the disease, thus discovered, with the small number of those which, like it, have the same constituents.

“ Thus, for example, if a patient presents himself with the internal part of the arms, the interval between the fingers and the abdomen exhibiting small distinct serous spots, pointed and transparent at the top, accompanied with itching, &c., in examining with attention, proof will be had that these do not contain pus—that the elevations are not solid and resisting, or have a circumscribed induration; still less, a papular elevation, covered with a dry hard scale, nor an injection disappearing under pressure; that is to say, it is neither a pustule, a papula, a tubercle, a squamous disk, nor an exanthematous patch, but in part a vesicle. Now it only remains to decide to which of the vesicular affections this appearance belongs, and proceeding in this way of rejection, a positive diagnosis will soon be arrived at. It is neither *miliaria*, nor *variola*, for these two diseases are accompanied with general symptoms, and, besides, in one, the vesicles are numerous and globular, in the other, they are larger and more inflamed: it is not *herpes*, for that is characterized by a collection of vesicles, in groupes, and here they are scattered. There only remains *eczema* and *scabies*: the vesicles of *eczema* are flat—here they are acuminate; they are generally collected together, in a greater or less manner, in *eczema*—here they are distinct; hence it is *scabies*.

“ The treatment of the diseases of the skin, experienced the effects of the confusion which reigned among them: a single curative treatment was applied to them all, and they were, for a long time, and even are still, attacked, under all circumstances, and in all forms, by the same vulgar means which have been considered as specifics, the bitter and sulphurous remedies.

“ But, in the last few years, the science has been enriched by a mass of precious materials, though they remained for a long time useless, for the want of exact knowledge and positive experience of their effects, and the circumstances in which they were applicable. M. Bielt has rendered a most important service, in filling up this hiatus, by his numerous researches, and precise results. He is, perhaps, the only one in France, who has made experiments on all the means that can be used in the cure of these diseases, and from which he has derived useful results.”

In speaking of cantharides and its occasional prepara-

tions, and answering some objections brought against them, our author says, "These preparations, like all heroic remedies, are capable of producing accidents, if they are imprudently administered, in immoderate and repeated doses, but the same may be said of a multitude of remedies introduced for a long time into the materia medica: mercury, sulphate of quinine, and tartar emetic, for example.

"Among the local means, there are few that are so constantly useful, and followed by results as advantageous, as the use of baths, and we cannot finish these observations, without calling attention to the hospital of St. Louis, which is one of the finest establishments, one of the most complete of its kind, and where they are administered, with an order and precision that is remarkable, to the amount of one hundred and fifty thousand yearly.

"It is to the labors of M. Biett, that it owes all the improvements it presents, and without speaking of the medicated liquid baths, of all kinds, or of the dry or other varieties of fumigations, administered by the ingenious apparatus of Darcet; of those local fumigations, exercised on the diseased parts, alone, by a plan invented by M. Biett; how much benefit has not been rendered by the *douches*, and baths of vapor, to crowds of patients."

We pass over erythema, to the consideration of *erysipelas*, which is divided into the simple and phlegmonous, with some remarks on the modifications which it offers, when occupying the jaw, scalp, female breast, umbilical region, and limbs.

"1st. *True erysipelas*, or that in which the inflammation does not extend beyond the skin, presents itself with the following characters: a deep red color, occupying a greater or less extent of the skin, which shows, by the redness of its edges, that this inflamed part is tumefied; this redness disappears momentarily from pressure with the fingers, which pressure is in general very painful; there exists a greater or less degree of pain, accompanied with a tingling and burning sensation; the pulse is accelerated; there is nausea and thirst; the mouth is bitter, and the tongue covered with a white coat. The cuticle which covers the inflamed part is sometimes raised to a greater or less extent, by a yellowish serum, and these vesications may acquire a considerable size."

Erysipelas may pursue a regular course, or leaving one part, attack another, or be combined in lax constituents with œdema of the lower extremities, constituting the œdematodes of Mr. Lawrence.

"2d. Phlegmonous erysipelas is accompanied with an in-

flammation of the cellular tissues, and may attack all parts of the body."

When it attacks the whole of a limb, and the cellular tissue is deeply affected, "the pain is extreme; the least movement of the limb causing the patient to cry out; the skin is red, much distended, and exceedingly painful on the least pressure; the pulse is frequent, hard, and corded; there is often delirium, violent thirst, dryness of the tongue, and profuse sweats." The termination is seldom by resolution, the limb continues to swell, has a doughy feel, and when the matter is discharged, it is mingled with shreds of gangrenous cellular tissue. But when the parts are strangulated by the aponeuroses, the violence of all the symptoms is increased, and extensive sloughing takes place.

Treatment. General bloodletting is to be freely practised, and local, in the vicinity of the affected part, where the patients are not enfeebled by previous disease, or any other cause of debility.

Emetics are never to be used without precaution, and *laxatives* are preferred to active *purgatives*.

"*Local applications* are generally useless in the cure of erysipelas; above all, refrigerant applications should be avoided, as they have often caused fatal effects: ointments and cataplasms will only augment the inflammation; vesicatories should only be employed to fix the erratic form of the disease, or to bring back the eruption to the part first attacked, when it has suddenly disappeared, &c.

"When these means are unsuccessful, or have not been employed, and the symptoms rapidly increase, we must resort to incisions, not when gangrene has taken place, but before, to endeavor to prevent it. The extent of the incisions must vary, according to the state of the disease, and its seat. The object of making them is to relieve the tension of the aponeuroses, and consequently the inflammatory strangulation. Incisions are also necessary, when phlegmonous erysipelas terminates by suppuration, or to prevent gangrene."

In the notes by the translator, Mr. Lawrence is quoted in favor of local applications, and Physick and Dupuytren, in favor of blisters. The opinion of Dr. Dewees, and Mr. Brodie, on the use of mercurial ointment, is well known to the profession, and our own experience in several cases, of the watery solution of corrosive sublimate, accords with the statement of Dr. Chapman. We are not a little surprized that no notice is taken of bark, or the still more valuable article, sulphate of quinine. After suitable evacuations, we have

witnessed the most decided good effects of quinine, particularly in the erysipelas of infants.

Scarlatina is divided into *s. simplex*, *s. anginosa*, and *s. maligna*.

Scarlatina anginosa. "In this form of the disease, the angina often precedes the fever, and the premonitory symptoms of the eruptions are far more violent than in simple scarlatina. The patient experiences, at first, a sudden sensation of stiffness of the muscles of the neck and lower jaw, and the mucous membrane of the pharynx presents a vivid red color: general symptoms rapidly develop themselves on the second day; the tonsils are much more swelled; the voice becomes hoarse; deglutition is painful and difficult—sometimes impossible; respiration is more or less impeded, and excites a painful feeling of constriction in the throat.

"*Scarlatina maligna* at first presents the same symptoms as the preceding, but on the second or third day, dangerous symptoms occur. The eruption usually takes place in twenty-four hours, but is sometimes later. There is much depression; an ardent thirst; dryness and burning heat of the skin; much restlessness; after some hours the symptoms augment in violence; excitement and delirium supervene; the tongue becomes dry; the pulse loses its force, but not its frequency; the skin remains hot; the eyes are injected; the cheeks of a crimson red color; the breath fetid, and the tonsils and the surrounding parts covered with a blackish secretion.

"Violent attacks of scarlatina are generally accompanied either with inflammation of the brain, of the thoracic viscera, or of the gastro intestinal mucous membranes. Oftentimes all of the larger viscera appear to be simultaneously affected, and nature, overwhelmed by the violence of the disease, soon succumbs."

We pass over the sequelæ of scarlatina, the appearances on dissection, causes, diagnosis, &c., to give a brief outline of the treatment. General bloodletting, in full robust constitutions, is advisable, early in the complaint, and leeches to the neck, when the angina is violent, produce great relief.

"Laxatives and purgatives are, at best useless, in the simple scarlatina, where it pursues a regular course; but when there are symptoms of either cerebral or pulmonary congestion, they should be freely used, conjointly with bleeding.

"Effusions with cold water, although not employed in France, have been used in England, by the most celebrated practitioners. This remedy, which has erroneously been

considered very dangerous, has been adopted in several epidemics of scarlatina, particularly when the eruption had arrived at its greatest height. When this has moderated, simple sponging with vinegar and water is to be used."

Belladonna. "Dr. Biett has observed this disease in an epidemic form, in one of the elevated valleys" in Switzerland, "in which all the children to whom belladonna had been administered, were without exception exempt from the disease."

As the affection of the throat so often gives rise to the most alarming symptoms, in the more violent forms of scarlatina, we would recommend the writings of Dr. Bretonneau, of Tours, and of Mr. Mackenzie, of Glasgow, on angina, croup, &c., to the attention of our readers. Dr. Bretonneau has applied hydrochloric acid to the fauces, by means of a sponge. In a number of cases of anigna maligna, &c., Mr. Mackenzie recommends a solution of lunar caustic in inflammations, commencing on the tonsils and fauces, and spreading into the œsophagus, larynx, and trachea. In the *Med. Chir. Review*, for October, 1826, the evidences in favor of these remedies are examined at large.

We have used the solution of argentum nitratum, in many cases of sore throat and croup, and should not hesitate to apply it freely in the proportion of a scruple to the ounce of water, not only to the fauces, but to the nostrils, and wherever the inflamed surface is within our reach, in all cases of scarlatina, accompanied with considerable inflammation of these parts. We have found a large soft camel's hair pencil the most convenient instrument for applying the solution.

We shall content ourselves with two or three extracts on the subject of *eczema*, a disease we are disposed to believe not unfrequently mistaken for itch, by a large proportion of practitioners.

"*Eczema simplex* is often mistaken for itch, with which, at the first glance, it certainly appears to have some analogy: like it, it is developed without inflammation; both affect certain spots, as the wrists and sides of the fingers; both excite violent itching; but the vesicles of *eczema* are flat, while in itch they are acuminated: those of *eczema* are always conglomerated; in itch they are usually single and distinct, so that a few only are to be met with on a considerable extent of surface, which is not the case with *eczema*. The pruritus, in this latter disease, is a kind of smarting, very different from the exacerbations in itch; in the first case, it is a real pain, while in the second, it is rather an agreeable

than a painful sensation: finally, the itch is essentially contagious, while eczema is rarely so.

“Diet, simple or emollient, baths or local bathing, with a decoction of bran or mallows, &c., are the only remedies required for acute eczema. The sulphurous preparations, so indiscriminately used in the cure of all the scabby eruptions, should be sedulously avoided. The same may be said of mercurial treatment.”

In all cases the cause must be removed, if possible; or the parts subject to it, as the hands of apothecaries, protected from the action of irritating substances. The chronic form usually yields to drinks, acidulated with sulphuric or nitric acid, and baths at 80° or 90°, rendered emollient by the addition of mucilage or gelatine. Where the eruption obstinately withstands the above treatment, the tincture of cantharides, or the arsenical preparations, given with caution, will generally succeed. When it occupies but a certain space and is of the scaly form, and the skin dry and cracked, as on the hands, it may be often removed by some of the following ointments. Ammoniacal protochloruret of mercury ℥j. to from ʒss. to ʒj. of axunge. Protonitrate of mercury, ℥j., axunge ʒss. to ʒj. Protoioduret of mercury, ℥j., axunge, ʒj. Camphor, added to these ointments, will allay the itching.

Scabies. Itch is placed by Bateman amongst the *pustulæ*, and divided into *papuliformis*, *lymphatic*, *pustulenta*, and *cachectica*, originating in some constitutions independently of contagion, and of course not always removable by the usual means.

Our author considers it to be vesicular, and says, “*Scabies* is an essentially contagious eruption, characterized by vesicles which are usually distinct, slightly acuminate, transparent at the summit, somewhat larger at their base, and accompanied with a greater or less degree of itching. Some authors have regarded and described it as a pustular affection, others have admitted one of its varieties to be of that nature, but it is an error. The pustules, which are only met with in a few cases, are accidental, and for a long time M. Biett has regarded the itch as vesicular. Nevertheless, under certain rare circumstances, some vesicles may become pustular.

“It never occurs spontaneously, and is not epidemic: this has been proved by numerous facts observed and recorded at the Hospital of St. Louis.

“As to the proximate cause, it is wholly unknown. *Scabies* has in turn been attributed to an acid principle, to a peculiar fermentation, and, finally, to the presence of insects.

This latter hypothesis is still admitted by a great number of physicians. Nevertheless, if we cannot affirm that they do not cause it, we at least, are far from crediting it."

Alibert and Bielt have never been able to discover insects, though they have employed the best microscopes.

Treatment. The preparations of mercury are considered as unsafe, and milder means have been advised instead of them. The powder of picorel, which is the sulphuret of lime, mixed with sweet oil, and applied twice a day, is said to effect a cure in fifteen days, in recent cases. Dupuytren's lotion consists of sulphuret of potash, ζ iv., water, a pound and a half, sulphuric acid, ζ ss. The affected parts to be washed with it twice a day. M. Bielt's favorite treatment is an ointment of sulph. sub., sub. carb. potass., and axunge, half an ounce of which is to be rubbed upon the eruption morning and evening, and a warm bath every day, or every other day. The usual time of treatment is twelve days.

Many valuable morceaux might be gleaned from the parts of this book devoted to impetigo, porrigo, prurigo, &c., not to mention thirty pages on syphilitic eruptions, which the limits of an analysis compel us to pass unnoticed.

In our judgment, it will be found the most useful work of its kind extant. The descriptions of the several diseases seem to have been faithfully drawn, from a careful inspection of their phenomena, and the treatment is the result of immense experience. That it has its faults, we have no doubt; and, if we are allowed to hazard an opinion—an opinion which we have formed while attending the Parisian Hospitals, and watching the effects of the prescriptions at the bedside of the patient, it is that a large proportion of the French physicians are so intent on physiology, pathology, diagnosis, &c., branches in which they have unquestionably risen to a very high pitch of excellence, as often to overlook, in some respects, a no less important branch, the treatment, or rather that part of it termed general or constitutional; a remark we think in some measure applicable to the work before us; but taken altogether, we can recommend it to our brethren of the profession, as being, in our judgment, the most useful of its kind extant.

S. W. A.

ART. III. *Address to the Community on the subject of Legalizing the Study of Anatomy*. By order of the Massachusetts Medical Society. Boston, 1829. 8vo.

THIS is an address prepared in consequence of a vote of the Society, to petition the legislature, "to modify the existing laws, which now operate to prohibit the procuring of subjects for anatomical dissection," which it would seem are as oppressive in Massachusetts as in our state, and we are very glad to see a movement in some part of the country on this subject.

"It is a truth," says the address, "sufficiently mortifying to the practitioners of the healing art, and disastrous to the community, that while all the pursuits of science are encouraged and facilitated, that alone which has for its object a knowledge of the structure of man, with a view to heal the diseases to which he is subject, is not only unprovided for, but virtually disgraced and condemned. It is time that the facts upon this subject be laid before the public, that the wants of the profession be fairly and distinctly stated, and the science of anatomy rescued from degradation and persecution." Indeed, we cannot conceive of a more palpable absurdity than the manner in which this subject is now treated by the law. What can be more preposterous than to expect men to be acquainted with the diseases of the different parts of the human body, who never saw those parts, and know nothing of their structure or their actions—to persecute, prosecute, and abuse surgeons and physicians for not being acquainted with their profession, and not having a knowledge of what they undertake, and yet to throw every obstacle in the way of obtaining that knowledge, and to make it criminal in them to use means for drawing from nature information concerning her organization and mode of operating in the human body, by which health may be preserved, and disease arrested. It is said that human nature startles at the examination of herself—that man revolts at physical self examination, yet those who overcome these feelings, who keep down their prejudices, fears, and revolts, to obtain the power to relieve their fellow beings of their pains and sufferings, are by those fellow beings obliged to creep like the thief and robber, in the dark, to acquire their necessary information—to tremble lest they be detected in the crime of accumulating knowledge, of satisfying a wholesome and honorable curiosity, of preparing themselves for the most benevolent

and useful professions; if detected, they are put upon a par with the culprit and convict; obliged, perhaps, to flee their country to save their life; and for what?—for daring to grasp from the decaying body a few necessary and salutary ideas, ere dust shall mingle with the dust—for cheating destruction of a few years possession, in order to ponder upon death and disease, and for preferring to spend that time which the light, the gay, and the luxurious spend in the dissipation, perhaps the waste, of time, in curing the causes of disease, which but for them might shorten their career of pleasure—in gazing on the remains of mortality, searching into its causes, and studying its prevention and subjection.

The necessity of dissection to the surgeon is not always admitted, it being frequently supposed that plates and descriptions are sufficient to guide him in his operations. “In all surgical operations,” says the address, “the hand of the operator is paralyzed, if not guided by a knowledge of the part in which the operation is going forward. Many a conscientious practitioner has declined performing surgical operations for the lack of this knowledge, to the great risk of life and limbs, especially to the laboring classes of community, whose pecuniary means do not allow them so wide a range in the choice of their physician.”

A variety of instances are given in which the want of this anatomical knowledge has been fatal. A hundred lives were supposed to have been lost by one old practitioner, within the range of his practice, from a want of the knowledge of the anatomy of hernia. Instances are given of its usefulness in the division of arteries, in dislocation, stoppage of the wind-pipe, such as are familiar to medical men, and are occurring every day. How poorly plates, models, and descriptions are adapted to give this knowledge, we have but to appeal to the observation of mankind. That plates and models are useful to recal to the mind ideas of what has already been presented to it by the senses, is without doubt true, but they never can give that equal knowledge, that precise and familiar representation of any physical object, that is to be derived by examination, through the medium of the senses, of that object; the engraver, the painter, the modeller, may labor and copy with the utmost exactness, but can never give that correct knowledge, although studied long, which is derived from a few moments’ examination of the object itself. Of descriptions, we can but say that words can never give ideas of things. “That language can reveal to me no sight that seeing has not informed me of, is a physical truth which experience will substantiate.”

But it is denied that dissection is necessary to the physician, although it may be to the surgeon, and this impression prevails with the profession, as well as with others. As dissection offers to us ocular demonstration, evidence through the medium of our senses, of a positive nature, it is the only means of forming in our minds a just idea of our structure. To deny the utility of anatomical examinations, in medicine, is contradictory to human experience—to human actions of every day. It offers us a knowledge of the construction of our own bodies—of that structure which we are to work upon in practice. Will it be said that we should not be familiar with that structure which our remedies are to affect—that structure which is acted by on the disease we are to cure? To go blindly to work, then—to know nothing of the organization which is out of order, is the height of absurdity. What should we say of that man who should undertake to repair a watch, without knowing anything of the structure of its parts, and of their mode of operating, both as to order and disorder? That we may understand the disordered actions of the body, after knowing its structure, we must know its healthy actions; disease being but an alteration in the healthy structure, or suspension of or change in the healthy mode of action of the parts of the body which tend to continue life, and which change or alteration tends to the cessation of all action, which is death.

We surely should understand how a machine ought to move, in order to know when it moves wrong. In inflammation of the lungs, we should know their structure in order to know their use, and their use, in order to know the effect disease, or the interference with their actions, may have upon the rest of the body, and the necessity of prompt measures.

Dissection for pathological purposes, by enlightening the medical practitioner upon the seat and causes of disease, affords him new evidence for his guide, teaches him what he has to hope or fear, and, by preventing him from giving way to a false security, will greatly moderate and prepare the feelings of friends, and save the character of the physician.

Time and observation can alone enable us to raise the veil which conceals from us the secrets of nature, and often a single new observation has, and still may, serve to elicit information upon a large number of facts, and may serve to enlighten us, upon a variety of diseases, especially when connected with clinical observation.

The utility of dissection, in our science, is evinced by the progress made in medicine, after the introduction of human dissections, which superseded that of other animals, by He-

rophilus and Eristratus, about three hundred years before the Christian era.

But even if actual dissection of the human body be necessary, to a knowledge of anatomy, say those who oppose its use, why not go elsewhere?—"Go to New York,* to Philadelphia, or to Paris—you will there find ample opportunities for dissection, without violating the feelings and prejudices of any one." This objection is met by the address, showing the impossibility of all the members of the profession leaving their country, on so expensive an undertaking, however practicable it may be to a few; "and if they are forbidden the means of acquiring a sufficient acquaintance with the profession, then three quarters of the profession must suffer for their ignorance." He further asks, how it would accord with the character of the country for improvement in education, to send students out of it, for instruction in a liberal profession.

In addition, other questions might be asked, as what more right we have to send our students to dissect the inhabitants of other countries, than that they should send theirs to our country for the same purpose, or why it should not violate the feelings of survivors there as well as here?

If in other governments, despotic governments, too, the pursuit of this, with other useful sciences and professions, is protected and assisted, why may it not be done in our country, where the government originating with the people, and intended for their good, should encourage and assist that profession, which would not be exercised, but that the health and lives of the community required it?

This brings us to speak of the proposed remedy, which the address brings forward, as likely to suit all classes, and to satisfy the wants of the profession.

It is simply this. It is well known that hundreds die, everywhere, having no claims of sympathy with any one, who having long been a burden on society, become another tax on it for interment; these having none whose feelings would be lacerated, leaving no friends whose prejudices would be startled, by submission of their bodies to dissection, the appropriation of their unclaimed remains, by law, to the use of medical schools, can be objected to by no one, and will be amply sufficient for the necessities of the case. Laws then will no

* The writer of the address was not probably aware that the laws of this state are as severe as those of Massachusetts, upon this subject, and that the professor, the lecturer, and student, in this science, are liable to imprisonment, in the state prison, for two years, and fine to the amount of two hundred and fifty dollars.

longer be necessary, making it penal to to exhume dead bodies, or to dissect them. The profession being then supplied with sufficient materials for gathering information in anatomy, will no longer be obliged to seek, in the grave, that indispensable knowledge, which now it is a crime to be without, and a crime to be detected in obtaining—they will no longer be compelled to make bricks without straw.

This is the proposal that is to be made to the legislature of Massachusetts, and we are happy, also, to state, that the same will probably be laid before the legislature of our state, this session.

We have spoken of the prejudices against dissection: it may be well to examine where the cause productive of them lies. And here we cannot but express an opinion that this may be found with physicians, as well as with their fellow citizens; and that the fault is the clothing with too much mystery the profession, and every thing concerning it. Anatomy has been too much concealed from the public eye, it has been too much made a wonder, and a means of exciting surprize, rather than an incitement to knowledge and information. And although, under present circumstances, human anatomy could not be suddenly brought before all classes of the people, yet the cultivation of comparative anatomy, by them, would tend much to the removal of that horror which the other produces in their minds. Was this made more familiar in our schools, and the examination of animals taught them, so much ignorance and so much antipathy, we think, would not exist.

Let us see what the address says upon this subject:

“From the great mystery with which anatomical subjects have hitherto been shrouded, there is no subject on which mankind are more generally ignorant, than in regard to a knowledge of the structure of their own bodies. This ignorance is one of the principal reasons why they are so readily duped by the pretensions of quacks and impostors, who undertake to perform what an anatomist knows to be physically impossible. Imaginary dislocations and fractures, cured by reductions equally fictitious, the fallacy of which a very little knowledge of anatomy will serve to detect, constitute the groundwork of the reputation of half the bonesetting quacks in the country. If dissection shall ever become a legalized pursuit, anatomy will be a popular study, not only with professional men, but with all who are interested in scientific pursuits, or even governed by common curiosity. The want of a knowledge, which must be spread through the community, if popular lectures upon anatomy were as common as those upon astronomy and other branches of natural science, is sensibly felt on many important occasions. In our courts of justice, it is not only necessary that the

physician, called to the stand, to give a medical opinion, as to the cause of death, in a case of suspected violence, or poisoning, should have clear and definite views of the anatomical structure of parts, but the court and the jury need to partake in this very knowledge. Most medical men, who have been called to give evidence upon such occasions, will testify that it is a difficult matter to make themselves fairly understood by the bench, the bar, and the jury. In the coroner's court of inquest, this deficiency of anatomical knowledge impedes the administration of justice, in a still greater degree. Legal medicine is a science, which in an eminent degree involves the life, property, and reputation of persons accused in courts of justice, and to render this science truly the organ of justice, and prevent its being perverted to aid the cause of error, its foundation must be laid in minute anatomy.

“At the present time, the medical profession is looked upon with a great degree of interest, by the extra professional part of the community. Our means of knowledge, and sources of skill, are such as can be enquired into and canvassed by all; and the days in which physicians performed the part of jugglers are past. Mystery and jargon are laid aside with flowing wigs and golden headed canes. Physicians now speak an intelligible language, and have a community of sympathy and feeling with those around them. From this, results a better acquaintance, among all classes, with the means of preserving health, and with the soundest methods of physical education. There is but one thing more wanting, to make this correlative influence of medical science, one of its most distinguishing honors, and one of the greatest blessings it has conferred upon society. Let anatomy no longer be viewed with horror, but be allowed to form a part of the education of every well informed man, and the advantages we speak of will be completed—the standard of knowledge will be raised. Physicians must be better informed, because the public are better informed. The criterion of medical talent, among reading and enquiring, and, consequently, enlightened people, out of the profession, will grow more and more just; and the weakness, ignorance, and prejudices, of mankind, will not so easily afford stepping stones to employment for the incompetent and unprincipled.”

“The public must choose,” says the address, “between these two things—the dissection of the dead, or the mutilation of the living. We say the *public* must choose, for it is their affair, and if they choose the greater evil, physicians will be exempted from a pursuit revolting in its nature, and not unfrequently dangerous, and even fatal, to their healths, in its consequences, and their occupation will still remain, if not as laudable and beneficial to community, at least as lucrative to themselves, and even more so; for ignorance frequently protracts disease.”

How little is it considered that this occupation of dissecting, and most of the laws for regulating medical practice, are

intended, as they should be, for the benefit of the people: that they all attain that object we would not assert, but in this particular instance, few, if any, reflect that dissection of the dead has for its primary and principal object and bearing, the benefit of our fellow citizens.

But the public will choose to be cured if sick—they are willing to receive the benefits of medicine and surgery, when their aid is required. When death is near their pillow, they can seek the knowledge which alone is to be derived from an acquaintance with the dead, and if that knowledge is not perfect, if all the information of the body is not possessed, and loss of life, or of health, is the consequence, the physician alone must bear the burthen, although laws are passed, threatening him with fine and the state prison, if he uses the means to obtain that knowledge, and although the hydra headed monster, prejudice, guards the store house, like a flaming sword, turning every way, and menacing his happiness, the loss of country, and perhaps of life.

Dissections are accused of producing a blunting of the finer feelings of our nature—of eradicating the warm ties which bind us to each other—of hardening human nature to itself. The little foundation for these assertions is abundantly proved by the numerous examples to the contrary. Need we mention in this country, a Warren, a Wistar, a Dorsey, and yet another, now sinking, soon to be enumerated with these, as having been. The numbers in other countries, whose feelings and actions were always amalgamating with humanity, benevolence, and charity, are by no means few. That there may be instances in this, as in all professions, of want of feeling and humanity—of men more addicted to the pursuit of gain, than the relief of suffering, or the advancement of science, cannot be doubted—that it is the case, even now, is a fact too serious to be contradicted; but let not those vices be charged to the profession, which ought to be placed to the account of the failings of human nature.

But we have other more serious charges against dissection to combat; we mean the exhumations which are practised in burying grounds, and the murders, which have produced so formidable excitements in Great Britain, to procure subjects. These are to be met on the same ground. They are the fault of the laws themselves, and not of dissections. Shall the high price, which the difficulties thrown in the way of obtaining subjects, oblige anatomists to give for them, holding out premiums to the suffering and degraded of mankind, to commit crime and rifle the grave, be brought against the pursuit of anatomy, rather than against the prejudices of man-

kind, and oppressive laws to which they should more properly be attributed? Did government protect and assist us, would this be the case? Were bodies easily obtained, and in a legal manner, as is the case in another country, upon the European continent, should we hear either of crime to obtain them, or of churchyard robberies? If the compensation is rendered enormous, and the crimes of murder and exhumation be placed almost upon a par, let the cause and the fault be placed where it ought, and in the right place, viz., in the severity of the laws on the exhumation of bodies, and for which there would be no necessity, was there a legal mode of obtaining them, as has been pointed out.

An objection to this mode of supplying the dissecting room, viz., by the appropriation of all unclaimed bodies, is alluded to by the address: it is, that it will fall heavier upon the poor than upon the rich. Now, was dissection of the body an absolute evil, or were the feelings of the less wealthy class of society to be harrassed by it, we should be averse to proposing it: but since the bodies of those, alone, will be taken, who have no friends to be assailed in their feelings and regrets, and since it will spare the feelings of many of the poor, more than the rich, for the rich can be secured within the walls of churches, of tombs, of mausoleums, and more especially, as the poor will be most benefited in its results, we must advocate the measure still stronger. That the poor will be most benefited, is in evidence, by the consideration that that they suffer most for the want of more surgical and anatomical knowledge. The surgeons of the rich can travel to attain it, and can, even by their wealth, procure it at home: but not so with those who are shut out by their circumstances, and by the prejudices of mankind. The rich, in case of accident, or necessity, can command talent and knowledge from a distance, but the poor must take the practitioner nearest at hand, even though ever so deficient in anatomical and surgical skill. "They are unable to pay a hundred dollars to get a competent practitioner, and therefore they must consent to be mutilated for life, by a barbarous and unnecessary operation. Surely, every one who has a real sympathy for the feelings of the poor, and a sincere desire to mitigate their sufferings, would repel, with indignation, the suspicion that he was willing to subject his poor neighbor to a hazard, from the mutilations of the ignorant, to which he would not for a moment think of exposing himself. Yet such is the inevitable consequence of the present state of anatomical study," in this country; "and there is no

reason to believe that this state of things will improve, unless the enlightened are bold enough to undertake to dispel the prejudices of the ignorant." And we are glad to see so able an "attempt to rectify an acknowledged prejudice"—to see some who are not afraid of "encountering the prejudices of those around," step forward on this occasion.

The Massachusetts Medical Society have certainly done themselves honor, in stepping forth on so important a subject, and in so bold and capable a manner. Whatever their success may be, we sincerely hope their example may not be lost upon other parts of the country. In our own state, a similar attempt will be made, suggested by this example. Could we address our legislature upon this subject, we would beg them to give it a serious and deliberate consideration—to view it as a point in which the tenderest interests of the people are concerned, for it is *their* business, and for *their* benefit. B.

ART. IV. *An Introductory Lecture, delivered at the College of Physicians and Surgeons of the City of New York, November 6, 1829.* By JOHN B. BECK, M. D., Professor of Materia Medica, and Medical Jurisprudence, in the University of the State of New York. New York, Charles S. Francis, 1829. 8vo. pp. 30.

ALTHOUGH this discourse was prepared and delivered in the discharge of an ordinary duty, devolving upon the professors of the college, to open their annual course of lectures with public introductions, such was the favorable impression made by it, upon the minds of a numerous auditory, that its publication was simultaneously called for, both by the students and the trustees of the institution. This honorable distinction it is fully entitled to, by the vigor and felicity of its style, by the lofty sentiments which it breathes, throughout, in favor of the higher branches of education, and by its spirited vindication of the honor and integrity of the medical profession. And we sincerely cherish the hope, that the mark of approbation so readily bestowed upon the Introductory Lecture of Dr. Beck, may act as a powerful and a salutary incentive upon the minds of his colleagues, and of all other professors engaged in the arduous duties of medical instruction. Introductory lectures have too often been made a subject of mere routine, in which the instructor gets through as easi-

ly and indolently as he well can, often repeating the same for years and years. This will not do: his opening lecture should every year present features of novelty, and exhibit proofs that he is not a mere copy of himself, a year before—that he has not been idle or dozing complacently over the labors of the past, but has made some advancement in knowledge—gleaned some additional stores from the productive harvests of scientific labor and improvement. It should be, in short, the test by which, not uninformed students, merely, first entering on their medical pupilage, may judge of the extent of his acquirements, or the brilliancy of his genius, but his own brethren of the profession, may be enabled to ascertain his continued industry in the acquisition of knowledge, and his unwavering attachment to the principles of an enlightened system of education.

It may be objected, perhaps, to this address, that its aim is to support the interests and promote the fortunes of the college, with which the author is immediately connected. Grant this fact; and allowing much for the partiality, incident to a friendship, neither slight nor transitory, we still anticipate, and that confidently, the favorable opinion of all those who are not blinded by personal prejudice and hostility.

If Dr. Beck does maintain the propriety of the system to which his college owes its origin and being, he has resorted, in its defence, to no vulgar arguments, neither has he descended to personalities, or invidious abuse. He has manfully advanced his opinions, and expressed them in cogent, clear, and unobjectionable terms. That we coincide with him in all his positions, we are not prepared to affirm; but we do claim for them an impartial and patient attention. It is not our intention to enlist the *Journal* in any party discussions, but our pages are open to a temperate and calm examination of the subject.

That those who have not seen the discourse before us, may understand its tenor, we shall present a short analysis of its principal parts, and accompany it with a few extracts, illustrative of the manner of the author.

After some pertinent remarks on the subject of education, generally, Dr. Beck assumes the position, that all improvement in knowledge, made by any nation, is the result of the agency of a power extrinsic to itself, either of forced attempts at civilization, or of accidental commerce with more enlightened nations. "In these ways, letters and the arts have progressively urged their course, from nation to nation, and from clime to clime. Cradled in Assyria, they travelled from thence to Egypt. From Egypt they were carried to Greece;

Greece gave them to Rome, and from Rome they spread over the whole of Europe." The same remark is extended to portions of nations. Hence the lower orders never attempt to enlighten themselves beyond the narrow circle prescribed to them by their predecessors, and all improvements made in their intellectual condition, are always effected by the agency of the superior grades of society.

In consequence of this state of things, it has been found necessary to supply the deficiency of taste, in the community at large, for the more refined kinds of knowledge, and the consequent want of encouragement and support for its cultivators, by the bounty and patronage of governments. Thus are universities, colleges, and professorships endowed; and thus have learning and the sciences been enabled to reach a height and ascendancy, which it may well be doubted if they could have ever attained without external aid and impulse.

An opinion has, however, obtained currency, of late years, both in Great Britain and in the United States, that education should be left to regulate itself, "like every other article which may be called for by the taste or necessities of the public." This opinion is in accordance with the principles of free trade, applied to the subject of education, and is defended on nearly the same grounds. Thus, it is contended that a wider field of competition would be thrown open, and no species of education would thrive, except that which was accommodated to the public taste, or required by the public wants. Adam Smith first advocated this doctrine, in his *Wealth of Nations*, and its merits are thus discussed by our author.

"Specious and plausible as the argument confessedly is, it requires but little penetration to perceive that it is principally reared upon a false analogy. Learning is considered as a thing perfectly analogous to articles of ordinary traffic. This is assumed in the argument, and the reasoning applicable to the latter is unceremoniously transferred to the former. Now this is a great error, and it is one which is fatal to the whole argument. There is no just analogy between articles of trade and learning. The one is addressed to our *physical wants*, while the other has reference to our *intellectual wants*—two classes of wants differing altogether from one another, in the desire which men experience to have them supplied. In the case of physical wants, instinct and the necessities of our nature compel us to their use. The more, for instance, the physical wants of hunger and thirst are excited, the greater will be the desire for food and drink. In the case of intellectual wants, there is no natural craving for supplying them. On the contrary, the greater the want, the more blunted is the feeling of the want itself, and the feebler is the desire to have it remedied. For instance, the more ig-

norant we are, the less are we conscious of the degradation of which it is the badge, and the less do we desire to be enlightened and instructed. There is, then, an essential and a radical dissimilarity between learning and the commodities of ordinary traffic. Any argument, therefore, which may be just and true in relation to the latter, is not necessarily so in relation to the former.

“But it is urged, that if education were left to take its own course, without patronage—without endowments—without privileges—in short, left solely to individual enterprize, unaided and unprotected by authority—the character of it would be better accommodated to the prevailing taste of the age and community. Now all this may be granted at once—indeed, it seems to be a necessary result of such a system. But it remains to be proved that all this would be advantageous to the general interests of learning, or of the community. I speak not now of common elementary education—what I have to say has reference to the higher departments of learning; and so far as these are concerned, if experience and history can serve us as guides, it will be found proven beyond a question, that a few well endowed and privileged universities and colleges, are infinitely better calculated to sustain the cause and extend the blessings of science, than the multitudinous institutions which may start into hasty existence, under the urgency of the vanity and ambition, or even worthier motives, of the individual projectors. The reason is sufficiently obvious. Institutions established by the proper authorities of the country in which they are located, from their very nature are enabled at once to commence, and afterwards to enforce, a high and elevated standard of education, which would be perfect ruin to those, which are dependent solely upon the whim or caprice of the popular voice. And this it is not less their duty to do than it is their interest. The permanent renown of an institution established by law, depends not so much upon her crowded halls or upon her sounding pretensions, as it does upon the high tone of literary and scientific feeling which it inspires in the minds of her pupils—the pure ambition which it encourages—and the industrious labor which it inculcates. Of such a system, the effects are perhaps not so immediate and apparent. The superficial and empty is always more noisy and obtrusive than the solid and profound. The shallow rivulet urges its fretful current into foam and noise, while the majestic river rolls its deep and swelling tide in solemn stillness, bearing on its bosom the labors of industry and the riches of commerce. It is with learning as with everything else. It is an ordinance of nature, that whatever is designed to be strong and vigorous shall be slow in coming to its maturity. The insect is mature almost at the moment of its birth—while man, designed eventually to control all creation, struggles through a helpless infancy and a tedious minority, before he attains the physical powers suited to his illustrious destiny. And so with learning. To be really good, it must be the result of laborious, protracted, and reiterated efforts—and this is the true reason why a sound and exalted system of education does not so immediately flash upon the public eye. In the end, however, its results are as glorious as its progress has been slow. It is only under

such a system that the bone and muscle of science can be properly elaborated; and if, in the course of a whole generation, it shall give to the world only one man of surpassing power like Newton or Bacon, or, in our own profession, like Haller, or Harvey, or Boerhaave, or Sydenham, it does more for the real advancement of knowledge, than could be effected by whole legions of the forced productions of the literary and scientific hot houses of the day."

The next objection to endowed institutions is thus considered.

"But it is urged against established institutions, that they have a tendency to repress competition. As this is a very common place and popular argument against them, and in the minds of not a few appears to be conclusive, it may not be inappropriate briefly to consider it. The objects of competition may be twofold—either to improve the quality of an article, or to cheapen the price. These are its objects in matters of ordinary traffic, and when both these are gained at the same time that the producer of the article makes his fair profit, competition becomes of the greatest benefit to the community. It encourages ingenuity and laudable enterprize. Individuals thrive and prosper, and the public reap substantial advantage. If, however, competition be carried so far as to compel the competitors simply to cheapen the article, without any regard to the quality, it is very evident that the public, instead of being the gainer, may actually be the loser. And if it be carried still farther, so as to involve in ruin those engaged, the effect is still more injurious, not only to the individuals themselves, but to the community at large. The truth is, there are, and necessarily must be, certain limits, beyond which competition cannot be pushed without producing mischief.

Certi sunt denique fines
Quos ultra nequit consistere rectum.

"The mass of mankind, however, are too apt, unfortunately, to consider that the great design of competition is gained when the article, whatever it may be, is *nominally* cheapened; and hence it is, that this is the mark aimed at whenever competition becomes excessive. Now this is no less true of competition in education, than it is in matters of ordinary trade. And whenever it is carried beyond a certain point, the necessary result is that the quality of the article is impaired."

The object of the discourse, it will be perceived, is to show the necessity of the patronage and superintendence of government, to secure the successful cultivation of the higher branches of learning, medicine, of course, included.

The history of education in this state, is next related. Little was done for the advancement of this important object, until after the glorious revolution which achieved our independence. It then became one of the very first subjects of legislation with the people of New York. A system was

adopted, in pursuance of which, a general university for the state was created, of which the supreme authority was confided to a board of regents, appointed by the legislature. The power of the university was not only ample, but supreme. It was authorized to establish schools, academies, and colleges, in any and every part of the state, and to exercise a personal supervision over their internal management. The superintendence of the literature of the state was altogether confined to it, and it was accordingly composed of men of the highest character for "wisdom, virtue, and patriotic services." Medicine fell, necessarily, under their paternal charge; and its various fortunes, before the establishment of the board of regents, and since, are the subjects of particular remark, in the text. On these we shall not dwell: they are too well known to need recapitulation. The author thus concludes in an eloquent and pertinent peroration.

"Every man of honorable feelings is deeply attached to the alma mater where he received his education. There he first became conscious of the extent and power of his capacities. There his mind was formed to habits of thought and study. There he received the first impulse to high and noble achievement. There he formed associations which have swayed the whole destiny of his after life. Loaded with honors, he leaves her with regret. But he can never forget her. Amid the busy scenes of life, his purest thoughts are directed towards her; and in the wane of manhood, as years steal over him, he enjoys a melancholy pleasure in gathering up the early recollections of his collegiate career. How embittered must all these recollections be, should some untoward fortune have prostrated in the dust the institution with which they are associated. When the Romans denounced their heaviest imprecations upon the person who should destroy the monuments of his ancestors, they merely wished that he might outlive all his relatives and friends, supposing this to be the greatest curse that could befall him. *Quisquis hoc sustulerit aut jusserit, ultimus moriatur.* Something like this must be the situation of one who finds himself outliving the institution from which he received all his literary or professional honors. Such a fate can never befall a graduate of this college. She has already stood the test of time. Safe in her rights, every year but adds to her security and multiplies her triumphs. And in the successive classes which are annually resorting hither, distinguished for their talents, industry, and enthusiasm, I witness the evidence and the pledge of her present safety and her future prosperity."

ART. V. *The French Practice of Medicine: being a translation of L. J. Begin's Treatise on Therapeutics; with occasional notes and observations illustrative of the treatment of diseases in the climate of North America.* By XAVIER TESSIER. Two volumes, 8vo., pp. 243, 236. New York, Elam Bliss, 128 Broadway, 1829.

THE new medical doctrine had for more than ten years furnished a theme on every branch of the healing art, with the solitary exception of therapeutics. This important department was still allowed to blend itself with preceding systems, and its independence remained as yet unvindicated. M. Begin, with a zeal truly praiseworthy, determined to fill up this void, and supply this unredeemed space, which was still wanting to complete the aspiring aim of the physiological theory at exclusive dominion over medical science. And it were both unfair and untrue to assert that he has not ingenuously and ably performed the arduous and delicate task, voluntarily, but commendably assumed. The attempt, if it be not deemed successful, by those who are not partizans of M. Broussais' school, will yet be admired for the skill with which it is made, and for the talent, enthusiasm, and remarkable speciousness of philosophy, with which it is enforced and illustrated. Our opinions, touching these exclusive doctrines, have been too frequently expressed to require repetition. While we defend what we believe to be truth, we are never averse from exhibiting to the public all that may be adduced against such belief. And we are not so blindly wedded to any medical system, however venerable it has become by time, or endeared to us by the prejudices of early education, as not to cherish, and also express, our gratitude to all those, who will, in candor and good faith, seek to add to our knowledge, reform our principles, and remove our ignorance. We feel, therefore, highly indebted to Dr. Tessier, for the very able and faithful translation with which he has favored the medical profession, in this country, of the novel and original views advanced in the work of M. Begin. Dr. Tessier's name is already familiar to the medical reader, as that of the intrepid editor of the *Quebec Medical Journal*, the first scientific periodical publication ever undertaken in the British North American colonies, and conducted with equal ability, zeal, and impartiality, as well as by his interesting contributions to this *Journal*. We should be pleased if Dr. T. could be induced to extend his labors, so as to present us in an English dress, with a full and much wanted co-

py of the works of the great reformer himself. In the expression of this wish we believe we are borne out by the voice of many of the profession.

M. Begin has divided his work into four books. The first treats of the general principles of therapeutics—of its relation to the other branches of medicine—of the medicating power of nature—of the basis of curative indications—and of the circumstances which contribute to modify the indications for the treatment of diseases—and, lastly, of remedies in general.

The second book speaks of *debilitating medications*, as applied to the various tissues and organs of the body, such as the organs of the senses—those of respiration—of the alimentary canal—of the lymphatic system—the nervous and the vascular systems, &c., and is divided into ten chapters.

The third embraces all the curative methods, appertaining to what he denominates *direct stimulating medications*, applied to the tissues and organs.

The fourth is devoted to the study of *revulsive medications*, or, in other words, to indirect stimulants.

From this expose, it is sufficiently obvious that M. Begin admits but two modes of operation, in remedies, which are all either debilitants or stimulants. This division, if not new, is simple; and, though it might be found to bear great analogy to the ideas of the great German physician of the last century, should it stand the test of investigation, it will not be ranked among the least services which the modern physicians of France boast of having rendered to the science of medicine, within the last twenty years. In order that every reader may be able to appreciate the justness of some of the grounds assumed by M. Begin, for this decision, we shall present some of his arguments.

Speaking of the *vix medicatrix naturæ*, he acknowledges as true, that in all cases where the animal organism is disturbed, the affection tends either to disappear spontaneously, with or without crisis, or to persevere and determine, by means of the sympathies, other disorders, more or less dangerous, terminating in the destruction of the parts affected, and not unfrequently of the life of the patient. "The animal machine," he says, "like all others, in which a derangement occurs, may resume the regularity of its actions, or it may be impeded more or less suddenly, according to the violence of the obstacle, and its consequent effects on the principal or secondary functions."

It has been a reproach, very generally used against the tenets of the new medical doctrine, and one which may, per-

haps, ultimately be found to have had its origin in the limited knowledge which the English reader has necessarily been confined to, from the absence of an English revision of any of the books which that school has lately brought forth; we allude to the reproach that the plan and principles of the treatment promulgated by its founders, have revived the reviews of the *medecine expectante*. In justice to the partizans of Broussais, we extract the following paragraph from the work before us, which appears conclusive on this point.

“This question naturally leads us to notice the problem so long in agitation in therapeutics, whether we are to prefer the active or the expecting medicine. The pretended advantages of the latter, formed one of the subjects on which ontologists have indulged their romantic pen with the most complacency. On enquiring more closely into the subject, it is found to amount to this simple question: whether we are to induce any change in the functions, while the organs which execute them are affected. Now, it is evident that, in this shape, the problem cannot but be resolved in the affirmative. Again, in all diseases, the issue being uncertain, and the crisis producing sometimes very serious consequences, it would be dangerous, and consequently inhuman, to leave the body a prey to disorder and pain until the period of the crisis, while we possess more sure and speedy means for the recovery of health. I know of no other medicine than that which is constantly active, but which varies the strength and nature of its remedies, according to the nature and intensity of the disease. Sometimes this medicating action is violent and must be executed by means of the most energetic substances; at other times, it is, on the contrary, confined to removing the cause of the disease, to the judicious use of dietetic and other simple and gentle means; but the object is constantly to induce a change in the actual condition of the patient. In this view, the physician endeavors to impart to the vital actions a rythm and a direction capable of annihilating the impulsion communicated by the disease.”

But, to return to the division of remedies into debilitating and stimulating; M. Begin conceives it is exclusively entitled to universal sanction, because it is perfectly in accordance with that general law of the organization, in virtue of which, all bodies in nature, coming into contact with it, either diminish or increase its action in the part to which they are applied. However exceptionable this classification might appear to those who advocate the opinion that whatever produces action in any part of the system, is a stimulus, and that, consequently, all physical agents are stimulants, considered in their relation to our physical organization, it cannot fail to command our serious attention, as it applies to the *less* immediate, not to say the secondary effects of remedies.

In the eyes of the physiological physicians, organic functions are the result of stimulation, the increase or decrease of which constitutes what we term disease. Hence it follows that all the disorders incident to our frame, are amenable to two great classes, viz., diseases from increased action, and diseases from diminished activity, in those functions. From this simple exposition, we have the rational consequence that all medications must have for their object, either to diminish or to increase one or more of those functions, and are therefore to be divided into debilitants and stimulants.

With those preliminaries, which form the subject of the three first chapters, we come to the fourth, which is subdivided into twelve sections, exclusively devoted to considering the various modifications which are called for in the treatment of diseases, by the age—temperament—sex—strength of the patient—trade and occupation—habits—appetites and desires—causes of disease—their intensity—their seat—their periods—and the particular circumstances in which the patient is placed.

Here we must refer those of our readers, conversant with the French language, to the leading principles laid down by M. Broussais himself, in his "*Histoire des Phlegmasies Chroniques*," without which it is impossible to form a correct judgment of the multiplicity of subjects contained in those twelve sections, and which we are necessarily precluded from embracing in the limits of a review. Besides, the perusal of that work of M. Broussais, which is the great bulwark of the whole physiological doctrine, as he himself gives it to understand, cannot fail to be highly beneficial to the practitioner, from its containing all the standard principles of his system, illustrated by a vast number of cases and practical precepts, and from the circumstance of its being generally free of those idle speculations, and endless controversies, which he has very judiciously reserved to be embodied in his "*Examen des Doctrines Médicales*."

In the fifth chapter, which speaks of the operation of remedies, we find the following passages, which are too closely connected with the views of M. Begin, relative to their employment, to be omitted in this place.

"The sympathetic effects of medicines are generally relative to the degree of local action which they promote. They manifest themselves almost immediately after that action has commenced, and increase and terminate with it, whether the remedy has been decomposed or propelled by the action it has promoted, or whether its impression has been gradually weakened by its continuance. The sympathies excited by the action of remedies are always elective,

that is to say, directed towards one or several organs whose functions they excite or modify. Their effects vary, either according to the medicated organ which excites them, or to the nature of the impression of the remedy on that organ. If, for instance, we take into the stomach wine, opium, camphor, oxymel of squills, hermes mineral, digitalis, it is demonstrated that these different substances will produce special sympathetic effects on the nervous system, the urinary organs, the internal surface of the ærian tubes, and on the heart. The same organ may then become the source of a number of sympathetic medications; in other words, the impressions made on one organ by the different medicinal substances are susceptible of being transmitted more specially to one or several others. Nay, more, some medicinal substances in contact with a living surface, may sympathetically excite organs, the tumultuous action of which may then be lessened and rendered less energetic by another impression. Thus, aromatic substances increase the force and frequency of the motion of the heart, which is diminished by digitalis."

"The effects of the absorption of the elementary particles of medicinal substances, is generally confounded with the exercise of the organic functions, from which it is frequently difficult to distinguish them. There can be no doubt that this absorption takes place in many circumstances. In therapeutics, it is much less important to enquire whether it takes place through the lymphatics or the veins, than to ascertain what conditions of the remedies or of the organs can best promote that absorption, and what influence this process will exercise in the production of the phenomena resulting from the operation of the remedy. Observations and experience furnish but few facts on this subject.

"The result, however, of the most accurate researches, proves that mineral substances are amenable to the assimilating process of living organs, and that they are either repulsed by them, according to the experiments of MM. Piedeman and Gmelin, or more readily absorbed without their substance undergoing any alteration; that animal matter, on the contrary, offering but a feeble resistance to the dissolving power of the organization, is most generally destroyed by the tissues with which it comes in contact; lastly, that vegetables hold their intermediate rank between the other two. This will explain why mineralogy supplies us with numerous heroic medicines and violent poisons, while materia medica derives less active agents from the vegetable, and particularly the animal kingdoms."

"The energy of this absorbing power varies in different organs, and according to the degree of activity which disease imparts to their functions. Thus, during certain affections of the nervous system, such as tetanus, the assimilating power of the stomach appears increased to such a degree that it will receive and dissolve enormous doses of opium without producing any narcotic effect. If, on the contrary, that medicine be injected through the veins, in the same disease, it will produce its usual effects. It has been long established that, when thrown up the rectum, in cases of nervous irritations, liquid opium will produce more effect than when given by

the mouth. These facts seem to indicate that the absorption of the particles of medicines is sometimes indispensable for their operation. But under what circumstances does this necessity exist? This is a question which physiological experiments have not yet decided, although it is of the utmost importance.

“It is to be remarked, however, that when injected into the veins, medicines which possess an elective action on certain organs, produce exactly the same effect when injected into the veins, as if administered through the mouth or introduced into the skin by friction; thus emetics, purgatives, narcotics, diuretics, will not fail to affect their particular organs. Castor oil itself, as Dr. E. Hale had dared to ascertain it on himself, when thrown directly into the veins, operates immediately on the gastro-intestinal mucous membranes; colic pains, and alvine evacuations, soon take place; an oily and nauseating taste is perceived in the mouth; all, in a word, indicates the special action of the remedy on the alimentary canal.”

The third and last way through which medicinal action can be propagated, is by the continuity and contiguity of the tissues.

“We operate by continuity, when, by stimulating part of a mucous membrane, we determine an excitement which extends to the whole surface of the organ; thus the irritation of the rectum, by means of suppositories, will be sufficient to promote an abundant secretion, and accelerate the contractions of the superior parts of the intestines. We act by means of contiguity when applying leeches to the abdomen in peritonitis or cataplasms to the skin which covers an inflamed organ. It is evident that the extent of action produced by such mechanism is always limited, and that we cannot but consider it as the local effect of a topic extending somewhat beyond the surface it covers, or a little more deeply than the tissue with which it is brought in immediate contact.”

One of the leading principles of the new medical doctrine, is illustrated in the following paragraph.

“The most simple medications, even on the best disposed subjects, always leave behind them in the living organs traces of their existence which are necessary to be known by the practitioner. Thus, after the internal use of irritating substances, the digestive canal generally retains a state of susceptibility and a slight tinge of irritation, which should be removed either spontaneously or by means of remedies, before the patient resumes his ordinary food and drink. An emetic, even when it is properly administered, always irritates the stomach, and occasions a degree of over excitement, which bitter liquors and broths will never fail to increase. Narcotic substances, given in moderately high doses, frequently induce in the brain a state of numbness and stupor, susceptible of becoming injurious, and which must be foreseen and averted by the practi-

tioner. General bleeding always increases the relative action of the nervous system, and this effect, which is sometimes of long continuance, is a contra-indication of its employment in the course of diseases complicated with violent spasms or convulsions."

In another section of this chapter, the author combats and altogether rejects the classification of remedies according to their therapeutical effects. In support of his position, he adverts to the facts that a febrifuge will sometimes exasperate the fever, a tonic increase the debility, and a stomachic or antispasmodic, augment the irritation of the bronchi, or the violence of the nervous symptoms. Hence he contends that the denominations of narcotics, diuretics, febrifuges, &c., must be left altogether to nurses.

We now hasten to the second book, which is devoted to debilitating medications. It is proper to remark, before we proceed further, that M. Begin divides all the resources of materia medica into no particular groupe or denomination of remedies, as may be imagined from what we have already seen. In laying out his plan, he has adopted the classification made by Bichat of the various tissues of the body, and these constitute the subjects of so many chapters, in which he treats of the employment of all the remedies and methods applicable to all the diseases with which each one of those tissues may be affected. And if we bear in mind what we have said above, of the division of all diseases into those by over excitement, and those by decrease of organic function, thereby reducing them all to mere inflammations, and to those characterized by debility, it is evident that the mode of treating diseases on such a plan must be exceedingly simple. How far this plan may be found admissible in practice, remains to be decided; but none can refuse to M. Begin great credit for the ingenuity it displays, both as a whole, as well as in its details.

The first chapter in this book, dwells on debilitants in general. The author thinks that among debilitants, emollients occupy the most conspicuous rank. They derive their medicinal properties from their containing a great quantity of mild, softening, insipid, viscous, and alibile principles, such as mucilage, saccharine matter, gum, starch, fecula, gluten, &c. Water itself he also considers essentially relaxing and debilitating.

"Mucilaginous and gummy emollients, when applied to the living tissues, penetrate and dilate them, and reduce their susceptibility, as well as their intense redness, and the force of their actions. They are eminently useful in all cases of inflammation; when put in

contact with the irritated tissues, they never fail to alleviate pain and restore the tone of organic actions. Acid antiphlogistics, on the contrary, are scarcely ever applied with success to the irritated parts; this is at least what is observed when they are applied externally; and if it be true that in cases of gastric irritation we administer lemonade, it will be seen that this beverage does not so generally succeed as well as mucilage and gums. Remedies of this kind seem to act especially on the circulation of the blood, reduce its excitement, and precipitate its motion; they have a tendency to diminish the heat and general turgescence attendant on febrile excitement. Owing to their possessing these properties, several authors, and particularly M. Barbier, have ranked them as a separate class called temperating medicines. With respect to water, it seems to have no other effect but to dilate and expand the particles of the blood, so as to lessen its activity on the tissues, and render it less stimulant. When applied immediately to the parts, in the shape of fomentation, bath, or sometimes in affusion, its effect is analagous to that of emollients, and leaves no traces of stimulation, as is the case with acids even the most diluted.

“These are the only explanations by which we can arrive at a correct idea of the mode of action of the various orders of debilitants. It is not likely, for instance, that mucilaginous and gummy principles resist the action of the digestive organs, so that their particles being absorbed, pass into blood, and are carried with it to all the parts, which they soften and relax. Such an hypothesis must be excluded from the dominion of therapeutical physiology. If emollients extend their action from the surfaces to which they are applied to the whole of the organism, it is owing, first, to their power of lessening local irritation, and thereby allowing the sympathetic excitement to subside, and all the increased actions to resume their normal type; secondly, to the influence which the relaxed tissues exert by continuity, contiguity, or by nervous communications, on more or less distant organs. Aqueous particles, and perhaps those of acids, alone penetrate by absorption into the circulation, so as to modify the composition of the blood, as well as its action on every part of the body.”

On the subject of cold, considered as a therapeutical agent, the views of M. Begin deserve to be recorded in his own words.

“Cold is never used in therapeutics but through the agency of water, the temperature of which is brought below that of the atmosphere, or to the state of snow or ice.* The effects of cold have been

* Cold has lately become a very useful therapeutical agent, and is very extensively employed, especially in cases of fever. Dr. Currie, of Liverpool, is generally known as the first who attracted the attention of medical men to the benefit which may be obtained from its use, although it had been resorted to long before him, but never to that extent, and to the same variety of cases in which he has been so eminently successful. It will be seen in another

the theme of endless discussions, on which a proper study of the laws of the living organism has alone been able to shed some degree of light. According to the state of vigor or debility of the patient, and the intensity, extent, and duration of its action, cold is either a useful tonic, a powerful irritant, or a great debilitant. Its impression may even cause death, by checking all motion in the organs and even the course of the liquids. But we are to consider it in this place as a mere debilitating agent.

"The practitioner must never forget, that the stimulating property of cold is solely owing to the vital reaction it determines in the part to which it is applied, and that this reaction is proportionate in its vigor to the degree of cold contained in the substance employed. We may then conclude that its application should be so continued as to destroy in the tissues to which it is applied, both the irritation existing in them, and their disposition to react against its impression. This practical rule is of the highest importance; and, should it be neglected, cold will increase, instead of diminishing, the congestions or phlogosis which it was intended to remove.

"Snow, ice, or water, at the temperature of zero, which the human body would not sustain long without the extinction of life, if it were general, may be applied on more or less extensive regions during hours, days, and even weeks, without interruption, or danger. Some parts of a delicate texture, and placed in particular circumstances, such as portions of intestines filled with stercorous matter, might be deprived of life by the too immediate and continued application of ice. It would appear that the thin and membranous tissues of those organs do not possess a sufficient degree of vital energy to resist the twofold impression produced on them from outside within by the cold, and from within outside by the intestinal contents, which would immediately bring down their temperature in harmony with that of the outward body.

"The primary object of cold is to condense the tissues, draw their elements closer, and increase their thickness and solidity. The skin is clutched and covered with asperities occasioned by the projection of the bulbs of the hair, and that of the sebaceous follicles. The parts covered with cold topics turn pale, owing to the contraction of the vessels, which cease to admit as many red particles of blood, and in which the circulation becomes less active. Accompanying these phenomena, the local nervous action is dimi-

part of this work that M. Begin's mode of administering it is susceptible of improvement, and of being applied to a greater variety of cases.

"While speaking of the general employment of cold, I may take the liberty to mention here, that ice has been several times used in the United States, and subsequently in some parts of Europe, for the purpose of allaying excessive vomiting in cases of violent irritations of the stomach, and with admirable success. I have myself used it in such cases with considerable benefit, and to me it appears beyond doubt that it might be found serviceable in a greater variety of circumstances than heretofore, without being attended with any of the evil consequences which might be apprehended from the irritation of the stomach, or from extreme general debility."—(*Note by Dr. Tessier.*)

nished, sensibility lessened, and a notable numbness is felt in the parts that have grown cold. We must not think, however, that this state is continued during the whole time of the application; for, soon after the first impression has been received, and although it may still continue to act with equal force, a reaction always takes place in all the parts submitted to the operation of cold; the blood is repelled towards it with renewed and increased vigor, the parts become more or less red and painful, and experience a sensation of intense and even burning heat. But these secondary symptoms are not of long duration; they disappear gradually, and the debilitating action is soon reproduced. Then the tissues remain pale, cold, and hardly sensible; the action of the capillaries is diminished, the irritation is suspended, and soon disappears entirely. The state of constriction and condensation which existed at the beginning also subsides; the tissues, as if weary of their contraction, become inert, relaxed, and feeble. To the action of cold is then subjoined the emollient and relaxing effects of water, which serves as a vehicle to the former.

“These changes, produced by cold applied to the tissues or to the skin which covers them, appear diametrically opposed to those determined by stimulants. In this respect, cold applications constitute one of the most efficacious debilitants we possess. They are employed in two opposite circumstances; the one, when there exists no tumefaction nor irritation in the parts, and when it is only necessary to prevent those accidents, as in contusions, sprains, &c.; the other, when the irritation and phlegmasia have already made their appearance. In either case, we may cover the parts with pounded ice wrapped in a bladder, piece of parchment, or of oil cloth—or rather plunge them into a vehicle filled with cold water, if the shape, function, or situation of the parts will permit. If the subject be young, robust, plethoric, I would recommend bleeding immediately after the accident; the results of which are intended to be obviated by those topics, in order that the reaction which they tend to excite be impeded, or at least lessened.

“It is useless, no doubt, to insist on the necessity of changing the liquid when it gets warm. When the irritation already exists, the precepts just laid down must be still more strictly observed, as they become more indispensable. We are not then to resort to cold applications before having somewhat subdued the local irritation, and the disposition to reaction, by means of general and capillary bleeding. Derivatives may often be advantageously combined to these two orders of remedies, as they tend to produce the same results. In almost all cases, in order to avoid the too sudden and too irritating action of an intense cold, it may be well to precede their employment by the application of water, the temperature of which will be lessened, until ice itself be used. In this manner, the irritated tissues are gradually cooled: they experience no sudden change, and do not operate any violent and dangerous reaction against the topic applied to them.”

We cannot forbear transcribing also what he says of the compression of inflamed parts.

“The compression of inflamed parts is seldom resorted to in therapeutics, and is, indeed, deserving of little confidence. By compressing the tissues in which irritation calls a greater quantity of blood, a mechanical resistance would be offered to the development of the vessels and to the turgescence of the organs, without destroying the cause of the impetus of blood to the part. This process may, perhaps, diminish the intensity of inflammation, by expelling the blood from the over excited parts; but it will also be liable to produce all the accidents resulting from strangulation of the vessels, which are an increase of pain, of inflammation, of fever, and even gangrene. The most methodical compression used in such cases, which consists in covering with a moderately light bandage not only the parts irritated, but those above and below, possesses no real advantages over capillary bloodletting, and exposes the patient to dangers of which the latter is entirely exempt. In the present state of science, it would be almost ridiculous to apply that treatment to erysipelas, phlegmon, whitlow, &c.

“But if compression be in those cases useless and even injurious, it may be employed with efficacy and benefit in many cases of chronic irritations of external parts. Thus surgeons frequently resort to it with advantage in ulcers of the legs, dilatations of the veins, &c. Some English practitioners have proposed it against scirrhus and cancerous swellings of the breast and of the lymphatic ganglia; but if some doubtful success has been obtained, numerous accidents have been produced by that treatment; and we cannot hesitate to give a decided preference to more proper modes of proceeding.”

Rest of the deceased organ is a measure which has been too much neglected, not to sanction our allowing space for his ideas on its necessity, as well as on that of emollients and other means equally beneficial.

“Such are the elements which compose, as it were, the debilitating medication. In order to ensure its good effects, we must, first of all, maintain inactive either the diseased organ alone, if its affection be isolated and without influence on the rest of the economy, or that organ itself and as well the whole body, if the sympathies are highly excited, and if general phenomena manifest themselves. Physiological reasoning and medical experience equally tend to demonstrate the excellence of this precept, which has never been properly urged by authors. The motions necessary to the exercise of the functions, are the most immediate and active stimulant for the tissues, and one which will the most infallibly exasperate irritations. These motions are necessarily accompanied with an evident congestion of blood, an increased temperature, an acceleration in the oscillations of the capillaries, and a more or less intense nervous excitement. There exists a remarkable analogy between this state of

the organs and inflammation, of which it appears to but the first stage, and in which it always terminates, when the organs are fatigued beyond certain limits. It will, therefore, appear evident that excitations of this kind must be highly injurious to the tissues when already irritated or inflamed, and that they must increase the severity of the symptoms.

“This rule of maintaining in a state of absolute rest the parts intended to be debilitated, admits of no exception. Its employment is sometimes sufficient to subdue moderate irritations in the tissues, and owing to its nonobservance, emollient and depleting remedies have often failed in affording relief. It is worthy of remark, that, in this respect, inflammations of organs which cannot be reduced to a complete inaction, are more difficult to cure than when they can be subjected to absolute rest. Thus, inflammations of the stomach are generally not so tenacious, and have not the same tendency to pass to the chronic state, as those of the lungs. Our efforts would be frequently more successful against diseases of the heart, if it were possible to keep that organ for some time in a state of absolute rest. Every practitioner must have witnessed the difference resulting from the agitation or tranquillity of mind in diseases of the brain. I am aware that the difference of temperaments of organic texture contributes powerfully to those various results; but it is the least we can say of this circumstance of rest or action in the irritated parts, to acknowledge that it possesses a great influence on the success of their treatment.

“In many cases it is important to place the over excited organs in such a situation that they be not clogged nor compressed, and that the blood may experience some difficulty in reaching and penetrating them. Thus, in cerebral congestions, the head must be kept elevated. Inflamed limbs must be so placed on cushions, that the affected part be more elevated than the rest, and so as to facilitate the return of blood through the veins.

“Next to rest and a proper situation, a more or less severe diet, or even an absolute abstinence, when joined to general and local bloodletting, tepid baths, breathing of fresh and damp air, are the most active debilitants. It is only necessary to mention them here, as we will hereafter treat of their use and mode of operating.

“Emollients and temperating medicinal substances are very numerous: nearly all emollients, properly so called, are derived from vegetables. Among them we distinguish the immediate insipid viscid principles, such a mucilage, fecula, &c. The emollient plants most commonly used are marshmallows, mallows, borage, bugloss, beet, the leaf and flower of mullein, grand consol, lungwort, dogs' grass, liquorice, and wild poppy. Among the fruits, seeds, and feculae, jujubes, dates, figs, dried raisins, linseed, sweet almonds, barley gruel, rice, the seeds of the *cucurbitacea*, hold the first rank.

“Animals furnish, as emollients, gluten and all the parts in which it is contained in large quantities, such as the white substance of veal, the flesh of turtles, frogs, snails, &c. Milk, whey, the yolks of eggs diluted in water, are also among the emollient substances derived from all animals.

“Among the acidulated antiphlogistics, those which are prepared with citric, acetic, oxalic, and tartaric acids, are generally preferred to the mineral acids in solution which are sometimes substituted for them. Several fruits, the lemon, the gooseberry, the pippin, acid prunes, and the barberry, belong to the same order. The acidulated tartrate of potash, boric and boracic acids, acidulated mineral waters, are also frequently used for the same purpose.

“Fixed oils and fat have also been ranked as emollients, but they cannot be useful against hardenings and rigidities of the fibrous and muscular tissues, unattended with inflammation. They are used in frictions, in cases of ankylosis, or stiffness of the tendons and ligaments; but the application of fat substances to inflamed parts, is generally injurious, for they soon become rancid, and then irritate the parts in contact with them.

“It has been repeatedly urged that we are not to persevere too long in the external or internal use of emollients, in the treatment of diseases. They are said to weaken the tissues, to relax them as well as their vital energy, and to keep up a sluggish, clammy, and indolent tumefaction, determined by the obstruction and diminished contractility of the capillaries. These objections are not without some foundation; and not unlike all other excesses, that which consists in carrying the use of debilitants beyond what is necessary, may also be improper. But daily experience teaches us that the continuance of those means after the irritation has subsided, is much less injurious than their untimely suppression, followed by the use of those stimulants called resolatives and astringents.

“Finally, it is not so much my object to discuss general assertions, which every one interprets according to his own private ideas, as to determine, from positive signs in all diseases, the cases in which debilitants are indicated, and the phenomena which point out the necessity of substituting other remedies for them. If it were possible to designate all the modifications which can affect the tissues, at the different periods of their disease, and to determine their external manifestation, pathological physiology would be much improved, and the science of indications would rest on a more solid basis. Other precepts, more special, and consequently more useful, would be substituted to those common place warnings against making too free with this or another remedy. It might be possible, for instance, to establish, not empirically, but from attentive observation and exact theory, the period in every disease when it is proper to administer one particular remedy, or to substitute another to that which has already been used. Every effort of the practitioner ought to be directed towards the introduction of this degree of certainty in the practice of medicine.”

We presume that no apology will be necessary for the length of the above extracts, which is more than compensated by its practical importance, and especially on account of its embracing nearly all the views to which we refer in the subsequent parts of this book.

Chapter the second gives us a view of the remedies appli-

cable to affections of the skin, of the subcutaneous parts, and of the tissues accidentally laid bare by solutions of continuity.

Speaking of the use of cold, M. Begin has the following sentence, which we almost regret to find without some explanation as to the extent to which he would be willing to urge its adoption, as regards articular irritations and rheumatism.

“When administered in the manner indicated in the preceding chapter, the refrigerant method might be advantageous in many cases of articular irritations, rheumatisms, herpes, &c.”

We will now proceed to extract other remarks on this same topic, and on that great engine of the new medical doctrine; we mean local bloodletting.

“Inflammations of the tonsils have been checked by means of compresses dipped in cold water, and incessantly renewed round the neck, and of pieces of ice allowed to melt in the patient's mouth. Might not some herpes be painful and disposed to become corroding, by the application of very cold and continued emollient decoctions?”

“We are not, however, to place unbounded confidence in that agent; it would be improper to imitate some German practitioners, who have made it a sort of panacea; but its action on the living tissues is too powerful not to produce some salutary effects. Physicians ought to combine it more frequently than they do, with leeches on irritated parts, and I have no doubt that by this combination we might be enabled to arrest the progress of numerous inflammations, which cannot always be checked by the ordinary means. It is desirable, indeed, that accurate observations on the effects of this medication should be collected and submitted by competent physicians to the test of experience.

“External inflammations are not to be treated simply by means of tepid or cold emollient applications. A more powerful agent exists, which must constantly precede the others, which always prepares or secures their good effects, and which is sometimes sufficient to destroy irritations, and to dispense with the use of tonics. This agent, formerly used too sparingly, and with too much timidity, consists in local or capillary bloodlettings, the operation and effect of which it is now proper to explain.*

* Whatever opinion may be entertained with regard to the general adoption of the physiological doctrine in all its bearings, we must confess ourselves highly indebted to its promoters, for having pointed out the extensive benefit which can be derived from those sorts of application in a great variety of cases, particularly in the treatment of external diseases. Five or six leeches was formerly considered a powerful application, whereas the partizans of M. Broussais's discoveries employ them in five or six times that quantity. There is little doubt but that such numerous punc-

“Two processes are generally adopted, in order to produce those evacuations of blood. In the first, leeches are applied in greater or less quantities on the diseased part, or in its vicinity; the other consists in the use of cupping, with scarifications, during the operations of which, incisions are made through the cutaneous vessels of the dermis, in order to let out various quantities of blood.

“Each of these processes excites on the living parts irritations on the one side, and a more or less considerable depletion on the other. Leeches, by dividing the cutaneous tissue, first occasion some pain; the blood runs towards every puncture to which the animal is attached; the surrounding skin becomes red, and an ecchymosis of a few lines in diameter is perceivable around the punctures. These seldom penetrate beyond the rete mucosum; although, in young children, they have sometimes reached the subcutaneous veins, or extreme ramifications of the arteries, and thereby produced serious accidents.

“The quantity of blood suddenly drawn by leeches, is not so considerable as the generality of practitioners believe. From accurate and frequently repeated observations, it follows, that every animal does not draw more than one or one and a half drachms of that fluid. But the sort of hemorrhage which follows their application is somewhat indefinite, and may be very considerable, especially if it be kept up by suitable means. During this loss of blood, the pain and irritation subside and disappear; the capillaries communicating with each puncture, seem to have acquired a decided tendency to carry and empty their contents in those orifices. There is no puncture of their size and depth which can discharge as much blood. It has sometimes happened, that when left to themselves, they have occasioned serious and even mortal hemorrhages. Robust men, in the prime of life, have been reduced to such a degree of paleness and debility that they appeared on the verge of dissolution. I have seen the blood run through a double mattress and a straw bed, from the application of twenty-five leeches to the abdomen. Young people do not resist so well as others, hemorrhages of this nature. M. Pelletan relates the case of a child six years old, who died from the loss of blood, after the application of six leeches to the chest; the female attendants had done no more than wash off the blood as it flowed. It might be possible to quote several other observations of this kind.

tures, especially in cases of internal inflammations, must, besides their depleting effect, produce a degree of derivative irritation which, combined with results that can be obtained from both cupping and blisters, saves great sufferings and uneasiness to the patient, and is generally free from accidents, particularly from those attendant on the repeated application of blisters to mutilated surfaces. Such is, indeed, the extent of the benefit it has produced in the practice of the French physicians, that leeches have become a very considerable and profitable branch of import trade in that kingdom. In buboes and inflammations of the testicle, they have surpassed any other mode of treatment I ever had occasion to employ, and in no other case have I ever obtained such decided benefit from them.”—(Note by Dr. Tessier.)

“These accidents, however, ought not to deter the practitioner; for they seldom occur, and might always have been prevented by a proper attention to the application of leeches. I might have remained silent on that circumstance, but it is not proper to dissimulate the advantages and inconveniences of therapeutical means. Phlebotomy has sometimes produced fatal results, yet no one has ever thought that it should be excluded from medical practice on that account.

“At last, the flow of blood arising from these punctures ceases. A solid coagulum is formed in their cavity and their surface, which offers an efficacious resistance to the hemorrhage. The irritation produced by the solutions of continuity seems to resume its course; a sensation of heat and itching is felt around the puncture, and becomes almost intolerable, especially at the axilla and anus, where the natural friction of the parts tend to increase it. The skin becomes red and somewhat tumefied, and each puncture forms the centre of an inflammatory disc, which, uniting with the adjacent ones, covers the whole surface of the part with an inflammatory crust more or less extensive. This inflammation generally terminates by resolution; but when the punctures have been irritated by rough linen, or other foreign bodies, or when the subject is disposed to suppurations, it is not uncommon to witness the appearance of boils, small abscesses, or pustulous eruptions, whose contents ooze out for a length of time.”

We have already said that this topic is the most striking feature in the physiological doctrine; and as the practice is gaining ground among our own countrymen, we cannot resist the temptation of presenting them with the remainder of M. Begin's remarks on its applications and effects.

“Such are the local effects resulting from the application of leeches. These are, 1st, a more or less violent pain, and a determination of blood towards the part exposed to the action of those animals; 2d, a loss of blood, the quantity of which varies, and which is determined, first, by the animal filling itself, and afterwards by the irritation it has occasioned, as well as by a sort of impulse communicated during its action, to the capillaries; 3d, a secondary inflammatory irritation, for the most part moderate, but sometimes sufficiently extensive to bring on suppuration, and even partial disorganization of the subcutaneous cellular tissue and of the skin.

“Cupping and scarifications occasion analagous phenomena; with this remarkable difference, however, that the loss of blood is not so great, not so easily kept up and continued, and that the cutaneous irritation, either during or after the operation, is more intense than that resulting from leeches. In a word, the former process is less depletive, and more stimulant than the latter, which has thereby obtained a decided preference over the other.

“The therapeutical effects of capillary bleeding are very remark-

able. They are derived from the phenomena indicated above, and it is necessary they should be well known in order to be enabled to make a judicious choice between leeches and cupping, according as either the irritation or the loss of blood is most urgently called for.

“The irritation occasioned by leeches on the parts to which they are applied, draws the blood from the neighboring vessels, which are thereby relieved of their contents, and lose their tension as well as their vital energy. This effect is proportionate to the number of animals employed, the force of their suction, the deepness of the punctures, and the continuance of the flow of blood after their removal. The depletion, when moderate, does not extend its influence beyond the contracted limits of their operation, or of the adjacent parts. Should the frequency of the pulse be diminished, the integuments lose their redness and turgescence, and harmony returns in the whole of the organic functions; these happy results are to be ascribed to the diminution of the pain and local irritations, and to the sympathies being less disturbed by the diseased organ, which has itself been relieved. Evacuations of blood through the capillaries, are never sensible in the large vessels, except when they have been so abundant as to affect the arterial system. To their local action is then added a general depleting effect more or less remarkable, and the results of both these orders of bleeding are simultaneously manifested in the patient.

“From these considerations we may easily deduce the rules by which we are to be guided in the use of capillary bloodletting. Leeches, and especially cupping, always occasion a local tumefaction, and a more or less violent irritation; they are, therefore, not to be resorted to when the inflammation is intense, the patient robust, and the vascular system in a high degree of excitement, except after having reduced, by one or several general bleedings, the excessive violence of the vital actions. Without this preliminary step, leeches applied about the affected part would almost inevitably increase the impetus of blood to the seat of the disease, and increase the irritation. The pain occasioned by the punctures, and the subsequent over excitement, have induced practitioners to apply leeches only to the neighborhood of the inflamed part, where the skin is sound, and not involved in the disease. The sensibility of the parts, and the intensity of their irritations, must be taken into consideration by the practitioner, and regulate his choice.

“In all cases, it is always necessary that the letting out of blood from the capillaries, be sufficiently considerable to counterbalance and prevent the inflammatory process which is apt to follow that operation. This precept admits of no exception. When the disease is intense, and the number of leeches is not sufficient, it is not uncommon for them to prove inefficacious, and even to increase the symptoms. We must, therefore, guard against this disappointment, and apply them in such quantity that they will prevent the subsequent stimulation otherwise occasioned by the punctures.

“Let the punctures bleed freely for some time, after the removal

of the leeches, by washing them occasionally with lukewarm water, exposing them to the steam arising from that liquid, and by subsequently applying cupping glasses, if possible; in this manner capillary evacuations will be rendered more copious and thereby more beneficial. A smaller number of leeches used in this way will procure more extensive evacuations than a greater number whose punctures would be left to themselves. It is requisite also to diminish the subsequent irritation, by covering the part with fomentations, and emollient cataplasms, which will complete the relaxation of the tissues and prevent the consecutive development of an unfavorable tumefaction.

“By attending to these two conditions, of allowing the punctures to bleed freely for some time, and of covering them with emollient topics, leeches are always followed with happy results, whenever their use is indicated; and we may not only apply them very near the inflamed parts, but even on those parts themselves, as M. Gamma, of Strasbourg, has successfully tried it in the most serious cases.

“What has been said of the accident which may result from the application of leeches, must warn the practitioner against neglecting to determine the precise time when the evacuation should be stopped, and what means are necessary to suppress it. This time varies according to the number of leeches employed, the strength of the patient, the violence of the disease, and other similar circumstances. The application of a dry or burnt linen is generally sufficient to stop the hemorrhage. But in debilitated, nervous, or lymphatic subjects, whose blood abounds with serum and whose capillary system is irritable, these topics may prove ineffectual. One of the most proper means to be had recourse to, in that case, is a thick compress, much heated, applied burning hot on the punctures, and kept for some time in contact with them; in very serious cases it may be necessary to resort to cauterization. The person who has applied the leeches must never take leave of the patient, especially a child, without having previously ascertained that the punctures are perfectly secure against the recurrence of hemorrhage.

“Almost every species of irritation capable of affecting the external tissues may be successfully treated by local capillary bleedings and emollient applications. The greater part of their alterations resulting from the continued excitement of the vital actions, frequently disappear under the influence of the same treatment. By directly lessening the stimulation of the organs, and relieving them of their redundant quantity of blood, capillary depletions have a tendency to reduce morbid actions, and to determine the absorption of foreign substances or of accidental productions, which the disordered process of nutrition has generated. They must hold the first rank among the debilitating pharmacological agents used in medicine against local irritations.”

The use of leeches has been extended by the partizans of M. Broussais to a much greater number of cases, and in much larger quantities, than by any of their predecessors.

We cannot but think, therefore, that some details will prove acceptable.

“Although at first applied exclusively to parts recently and violently inflamed, leeches have gradually been used with no less advantage against all sorts of chronic irritations. Let us now consider a few of the most important cases in which they produce beneficial effects.

“In erysipelas and phlegmon, the use of capillary evacuations has been so generally adopted, that it is unnecessary to dwell again on the advantages they possess over all other means in those diseases. Phlegmonous erysipelas, a much more serious affection, frequently terminating in gangrene of the subcutaneous cellular tissue and of the skin, is as successfully treated by renewed applications of leeches as any of the above mentioned diseases. The antiphlogistic method is then the only one which is sanctioned by sound physiological principles, and if a blister placed on the centre has sometimes succeeded, it was by concentrating the irritation to one point, thereby occasioning violent pain, and exposing the patient to all the consequences of an aggravation of the disease. This measure is justifiable only in debilitated, lymphatic subjects, in whom the progress of the irritation is slow, accompanied with lividity of the parts, and tending to a rapid termination by gangrene. In these special cases, blisters have frequently succeeded in the hands of M. Dupuytren, who has introduced the practice at the Hotel Dieu.

“Cutaneous eruptions, the sympathetic results of acute gastro-enteritis, such as variola, rubeola, scarlatina, &c., have the effect, when they are intense, of reproducing the fever which their development has caused to disappear. Daily observation demonstrates, that the febrile excitement, secondary to eruptive gastro-enteritis, is always commensurate with the intensity of the external phlegmasia from which it arises. Hence it has appeared rational to reduce this inflammation, or at least attempt diminishing its violence, by means of leeches applied to the parts where it is most strongly manifested. M. Broussais, who first demonstrated the advantages of this practice, never fails, when the variolic eruption begins to appear, to apply leeches to the neck, in order to subdue the violence of inflammation in the face, and he has generally observed the secondary fever run through its course without malignity or any serious accident. In the most simple cases, when the cutaneous inflammation is not intense, emollient lotions, frequently applied to the pustules, are sufficient to moderate the tumefaction, tension, and pain, and to facilitate dessication of the cuticle.

“Boils are successfully treated, in their beginning, by means of capillary bloodletting about their bases. This will seldom be found sufficient to destroy the inflammation, and arrest the mortification of some fasciculi, of the subcutaneous adipocellular tissue; but it will prevent that burning pain and considerable tumefaction which are often manifested. The irritation being diminished, the discharge

will be free, and the disease will very rapidly terminate. I have been induced to suspect that, in many cases, furunculi, treated in this manner, have less tendency to make their appearance in several places, than when suppurative plasters or other irritants are applied to them, which prolong their duration and allow other parts of the skin to be sympathetically affected.

“The anthrax is composed of a collection of furunculi, and is to be treated in the same manner. One of the most distinguished practitioners of Lyon informs us, that for the last three or four years he has not used incisions in this disease, but solely confined himself to the application of some leeches, at its commencement, emollient topics, and a regimen appropriate to all inflammations. A constant observation has convinced him that these simple means are, in all cases, preferable to others, and that it is the same case with these affections as it was with gun shot wounds before the restorer of French surgery had entirely changed their mode of treatment.*

“Of all cutaneous inflammations, the ringworm is one which physicians seem to have applied themselves to exasperate by means of the most energetic internal and external stimulants. The irritation is seated on the secretory follicles with which the skin is abundantly supplied, and gives rise to the formation of scaly layers, more or less dense, thick, or adherent, which have formed the basis of classifications altogether insignificant for the therapist. Numerous facts have proved that herpetic eruptions of all kinds are more speedily and radically cured by the continued employment of local capillary bloodletting, when the irritation is violent, and by emollient applications and a light severe diet, than by all the preparations of sulphur, which are so abusively and so frequently resorted to. These preparations are, however, useful; but I have often ascertained that they can never be serviceable before the local stimulation has been subdued by means of antiphlogistics, and before the disease has arrived, without pain or intense redness, to that stage in which the solids do not appear to possess a sufficient degree of vital action to cicatrize. These principles, with respect to the local treatment of herpetic eruptions, have been proclaimed by several practitioners, and especially by M. Alibert, and are now adopted by the most respectable part of the profession. Indeed, it is difficult to conceive how some men can give the preference over them to routine and empirical practices, which have so frequently proved injurious.

“One of the most serious evils arising from the unreasonable and continued application of stimulating substances on eroded and herpetic integuments, is the transformation of their solutions of continuity into corroding cancerous ulcers. These disorganizing affections, extending with more or less rapidity to distant parts, generally kill the patient after the most cruel sufferings. By destroying

“* *Compte rendu de la paratique chirurgicale de l'Hotel Dieu de Lyon pendant six annees.* Lyon, 1824, in-8.”

the surface of those ulcers to a certain depth by means of the arsenical paste, they are rather severed from the body than cured, and this measure is not always practicable, efficacious, nor free from danger; on the contrary, daily observation proves that cutaneous corroding eruptions, even in an advanced stage, are susceptible of being cured by local bleedings, emollient applications, in a word, by antiphlogistics, combined with counter irritants, continued with perseverance. To all the facts of this kind published by MM. Fallot, Pons, Lallemand, Maréchal, and Treille, we must add those of M. Fêtu, and other military surgeons.*

"Chronic tumefaction, with hardening of the skin and cellular substance, which seems to constitute the first stage of elephantiasis, would appear to me to derive more benefit from local bleeding, rest, emollient baths, and the application of a compressing bandage, rather than from stimulants, which are generally employed against all the varieties of leprosis.

"To these diseases of the external parts of the body, we must add those resulting from the inoculation of certain virus, such as the venom of the viper, carbuncle, and the disease called *charbon*. In these cases, also, inflammation is the principal character of the disease; but it is accompanied with a deep affection of the nervous system, and a manifest tendency to mortification. It has been proposed to confine their treatment to the use of emollients and local bloodletting; but this method is not so certain and beneficial as the one which has been sanctioned by experience. It is undoubtedly improper to carry the use of stimulants too far, but more so if we proscribe them altogether. Thus, we are to reduce the excess of inflammation by local bleeding and emollient applications, while administering internal stimulants in the bite of a viper, and cauterising with butter of antimony the gangrenous centre of the carbuncle and pustule maligne. We will return to the subject when speaking of internal medications."

"It is a pathological fact necessary to be mentioned in this place, as possessing a very material influence on the treatment of diseases of the skin, that most of them are sympathetic affections of gastro-intestinal diseases. The mucous membrane of the alimentary canal is so intimately connected with the skin, that irritations in the former frequently determine the same affection in the latter. We have seen, in their acute stage, the eruptions characterizing variola, varicella, scarlatina, rubeola, furunculus, and erysipelatous inflammations, anthrax, and other similar affections, arising from the existence of gastro-enteritis, by which they had been brought on, and were then kept up. The chronic species of herpes, of different kinds of ulcerations, and of hardenings in the skin or cellular substance, are, in many subjects, the result of the same internal disease. These complications may easily be ascertained by the coexistence of symptoms of gastritis with those of the external affection. By exasperating the former, we increase the intensity of the

* "Memoires de Medecine, chirurgie et pharmacie militaires, tom. XVI."

latter; for both seem to be in a perfect state of mutual dependence. The practitioner must, therefore, be well convinced of this truth, that the principal seat of the disease is in the viscera, and that these must consequently require the most active remedies. If he should content himself with topical treatment on the part affected, his attempts would prove useless, and have no other effect than to palliate the disease for a short time; after which it would appear with more violence and obstinacy than before. In all diseases of the skin or cellular substance, we must pay particular attention to the state of the stomach and intestines, which not unfrequently require more active medicines than the external affection. Generally speaking, those eruptions disappear speedily and spontaneously, when the visceral irritation has ceased; and in the most obstinate cases, nothing more than the most simple topical treatment will be necessary.

“As affections of the alimentary canal frequently attack the skin, so do debilitants, given internally, manifest this effect on the integuments. Hence these internal medications should be added to the topical remedies whose action they will facilitate and ensure.

“Cutaneous irritations, ulcerations, and degenerescence of the skin, are sometimes also complicated with internal affections of the blood, or lymphatic vessels, as may be observed in scurvy, syphilis, scrofula, &c. In such cases there exists no general disease, but merely a multiplication of irritations to several organs by sympathetic agency. The attention of the practitioner must be directed to all the parts affected; and it is generally requisite to combine the use of counter irritants with the local treatment, as well as of those means calculated to operate a strong modification in the organic actions, and restore harmony in the process of nutrition. Such is the course we ought to pursue in order to be successful in our treatment of diseases, and of their numberless complications.”

M. Begin places an equally implicit confidence in this plan of treatment for nearly all the affections occurring about the organs of the senses, and of the genito-urinary organs, which complete the third and fourth chapters of this book, which otherwise contain little more than is to be found in most of our modern authors.

The readers of our Journal will no doubt forgive us for passing over the fifth chapter, entitled, “Of debilitating medications applied to the organs of respiration,” as the whole of the chapter was furnished to us last year, by Dr. Tessier, while his translation of M. Begin's treatise was still in the press, and published entire in our number for September, 1829, to which we refer, as well as to a note appended to that chapter, containing the history of a case which Dr. Tessier had occasion to observe in Quebec, some years ago, which has also appeared in the department of our original communications, in the same year.

This leads us to chapter the sixth, which treats of the application of debilitants to the alimentary canal. This chapter may be considered the corner stone of the physiological doctrine; hence the necessity of a thorough and attentive investigation of it, with the view to form some opinion of its soundness.

To those not intimately acquainted with the doctrine of M. Broussais, an explanation is necessary of what he and his partizans call irritation, inflammation, and phlegmasiæ, lest they should take fright at the frequency with which the terms gastritis, enteritis, and gastro-enteritis, which in their opinion are of every day occurrence, and are almost uniformly attendant on every disease which may beset our organization, even on local affections in parts never, before the days of Broussais, suspected of having any connexion with the alimentary canal. With this view, it will be only necessary to inform the reader that these three words are, according to the tenets of that doctrine, synonymous, both among themselves and with what we commonly call nervous irritability, a condition which M. Broussais considers to be altogether dependent on, or at least accompanied with, some degree of vascular excitement. With this admonition, we shall now introduce a few extracts illustrative of the subject under our present consideration.

“The first indication in acute or chronic gastritis, is abstinence, which, however, should not be equally severe in all cases, but appropriate to the violence of the disease, and to the wants of the constitution. Thus in acute gastritis, all nourishing liquids, such as broths, should be totally prohibited; but in the chronic stage, it is only necessary to limit the diet, abstain from all stimulants, and prescribe gentle food, easy of digestion, which requires the least possible exertion from the stomach.

“These rules are no less useful in the treatment of inflammations confined to the intestines, although the patient may not so forcibly feel the necessity of conforming himself to that direction. In cases of inflammation of the colon, the stomach continues to call for food. Its digestive process is not easy and rapid, but is also accompanied with ease and relief, as it produces a momentary revulsion of the enteritis. But if the passage of the chyme through the diseased portion of the intestine occasions pain, colic, and diarrhœa, the vulgar will not detect the cause of these accidents. It is, therefore, necessary, as in gastritis, either to exclude all kinds of food, or those which call for the least exertion on the part of the irritated organs.

“It is of the utmost necessity to prevent and trace the effects of the nonobservance of diet in the course of diseases of the alimentary canal. In many cases the physician is placed between the fear of exasperating the disease by allowing food, and the danger of cau-

sing, by a longer abstinence, the stomach to become irritated by a continued absence of the materials it requires. We know that, according to circumstances, the excess or privation of the digestive process will occasion irritations in that organ. The call of the patient cannot be a safe guide for the physician. This call, which is frequently factitious, or the consequence of a desire to increase muscular strength, is sometimes itself determined by a species of irritation which its indulgence would exasperate. The only rule by which we can abide in obscure cases, consists in examining attentively the idiosyncrasy of the patient, in comparing the morbid phenomena, and in determining from the effects already obtained, what course is to be pursued. Should gastro-enteritis be acute and accompanied with violent symptoms of irritation, there can be no doubt of the necessity of a complete abstinence, which must be also persevered in, if the disease has somewhat subsided, and appears to diminish progressively under the influence of this negative medication, though the patient might call for food; but should that call become more urgent, and the irritation appear constantly to increase, in spite of the most severe diet, a wise and prudent practitioner should allow some food, watching its effects, in order to check them in time, and suppress aliments before they have proved injurious. If, in a greater number of cases, alimentary substances, too soon and too freely indulged, have kept up or exasperated gastro-enteritis which, in other frequent circumstances, were too superficially observed and attended to, the privation of food, when carried too far, has produced effects no less serious than fatal. I say it again, an attentive observation of the patient and of the modifying causes operating on the constitution, is alone capable of preserving us against falling into this or the other extreme.

“The local action of emollient drinks in gastritis must be compared to that of internal topics put in contact with diseased surfaces. They moisten and relax in an immediate manner the irritated mucous membrane. They allay pain, dissolve and carry with them all diluting substances from the surface of the intestines. It would, however, be inaccurate to assert that all liquids given during the course of gastro-enteritis, only operate as local bathing or simple fomentations, and that the tissues remain insensible to their action. On the contrary, those liquids only excite in the stomach and intestines a more or less considerable exertion, according to the nature and quantity of the substances they hold in solution. In many cases, this digestion, however free, occasions uneasiness, and an evident increase of local irritation. Their composition must be as simple as the intestinal irritation is more considerable. The effects of stimulating or simply nutritive drinks, are more especially injurious in acute gastritis and irritable habits. Water, either by itself, or containing small proportions of sugar, of gum adragant, or of fresh mucilage, is the most appropriate, and the only liquor to be administered. Barley water, especially when saturated with fecula, and emulsions containing oil or a quantity of azote, are often rejected, or increase the sensibility of the tissues. I have seen, in some cases of enteritis, the most lenient drinks, and even water it-

self, excite an over action of the digestive organs, and promote abundant secretions of mucus, and the disease could not be cured without the absolute abstinence of all kinds of ingesta.

“ We have already observed that acids are more irritating than mucilaginous and gummy substances. This remark can be usefully applied to the treatment of gastro-enteritis. There are cases, however, where acidulated drinks are more palatable, more cooling, and consequently more beneficial. This takes place when the fever is high, the general heat intense, the thirst considerable, without any increase of gastric sensibility. We also observe the propriety of acidulated drinks in gastro-enteritis, accompanied with abundant secretions of mucus or bile. In the former case, the acid particles appear to be readily absorbed, and to act directly on the blood; in the latter they modify the irritated surfaces, and drive out with more facility the foreign materials increasing the irritation by which they have been elaborated. Those drinks are also more beneficial in the heat of summer than in cold weather. In all cases we are to give the preference to mild acids, such as the sweetest pippins, or oranges, diluted in a large quantity of water, or rather incorporated into solutions of gum or mucilage. Citric, acetic acids, or that of gooseberries, are generally too pungent, and produce unfavorable results where the stomach is highly excited; mineral acids are still more injurious. Tartarized lemonade, in the absence of that composed of vegetables, is one of the most efficacious.

“ The temperature of those drinks should be attended to. When too warm, they increase the general irritation, and stimulate the mucous membrane of the stomach; when too cold, they might, in some cases, determine a violent reaction in the capillaries of that organ, and prove no less injurious. Their proper temperature is from twenty-five to thirty degrees. If the evacuation is much excited, and the atmosphere very hot, they may be taken cooler; and where the integuments are cold and shivering, and the temperature of the atmosphere low, warm drinks are advisable. The taste of the patient is generally the best criterion by which we may determine what is more beneficial to him in that respect.

“ Another, and the last circumstance with regard to drinks, is their quantity; they must be given in such abundance as to mitigate the internal heat, cool the irritated surfaces, subdue the energy of their vital actions, and introduce into the circulation a quantity of aqueous particles sufficient to lessen its excitement as well as the stimulating property of the blood. But, in endeavoring to fulfil those indications, we should keep in mind that the liquids taken into the stomach, often irritate it by their own weight, by the distension they occasion, and by the exertion required for their digestion. These inconveniences may be avoided by allowing the patient to drink but little at a time, and at long intervals, in order that the stomach be partly freed from the preceding dose before another is administered. The intensity of the symptoms of irritation, the sensations of comfort, of uneasiness, or of pain, experienced by the patient after each drink, must engage the practitioner to urge or lessen

it. The precept so universally followed, of drinking abundantly, has, no doubt, proved injurious to a greater number of patients laboring under gastro-intestinal irritations. Sometimes the most lenient beverages will occasion indigestion, from the circumstance of their being given in too great quantity at a time, or in too frequent doses. In this case they do not relax and cool the stomach, as is commonly said, but irritate it by their presence, and by the over action required by their elaboration.

“The considerations enumerated in the preceding chapter, on the employment of emollient topics, are equally applicable to fomentations on the abdomen in violent gastritis and gastro-enteritis. Their efficacy cannot be less evident in these diseases than in those of the lungs. They also operate through the medium of the sympathies existing between the mucous membrane of the stomach and the portion of integuments covering the epigastrium. We not unfrequently see the pain attendant on certain cases of gastritis, which is still greater in enteritis, suddenly disappear under their influence. They always contribute powerfully towards subduing the internal irritation, and its consequent sympathetic disorders.”

With these preliminary extracts, the reader will be prepared to meet the following, the application of which cannot be foreign to any practitioner, who has given the least attention to whatever information he may have collected from the fragments hitherto scattered throughout the various periodicals in the English language.

“We now come to that kind of medication the most strongly recommended by the partizans of the physiological school, and which some superficial minds have held up as constituting all the therapeutics of that doctrine; I mean the application of leeches to the abdominal parietes. Whatever may have been urged against a practice now adopted by the great majority of physicians, local bleeding is of unquestionable benefit in the treatment of gastro-enteritis. There is not one of those adversaries who, since the most recent publications on that doctrine, has not more frequently had recourse to it, or who can deny that his practice has been rendered much more successful by that means, as well as by the dereliction of stimulants, of which, until lately, a strange abuse was made in the treatment of pretended essential fevers.

“When placed on the epigastrium, in inflammations of the stomach, leeches operate in the most powerful and direct manner on that viscus. The local evacuations they produce are always indicated whenever the pulse is raised, the heat of the skin increased, the tip and edges of the tongue red, and when there exists a considerable thirst and internal heat. The number of those insects is from six to twelve for children, fifteen to twenty for females and persons above the age of puberty, twenty-five to thirty or forty for adults. One application is seldom sufficient; the disease generally recurs a second or third time, growing less and less, and requiring

for its ultimate cure the continuance of the remedy which had been at first resorted to. By following in this manner the course of the irritation, and persevering in the treatment at its several returns, we always succeed in lessening its duration, and avoiding the dangers by which it may be followed.

“Whenever the stomach is alone inflamed, or more so than the intestines, leeches should always be applied to the epigastrium. In inflammation of the duodenum, or of the liver, it is proper to place them towards the right hypochondrium; and if the large extremity of the stomach or the spleen are affected, towards the left. When irritation exists in the first division of the small intestines, leeches should be spread over the centre of the abdomen, and when it affects the ileum and cœcum, they are better placed in the iliac regions, and opposite the diseased organ. Should the inflammation be seated in the large intestines, and especially in the transverse and descending portions of the colon, local bleeding should be performed at the anus. The superior hemorrhoidal arteries, as well as those that belong to the colon, originate from the same trunk; the depletion of the former must, therefore, have a powerful influence on the part in which the latter ramify. Thus distributed on every point of the abdominal parietes, the most contiguous to the inflamed organs, or connected with them by the most intimate vascular or nervous communications, leeches produce rapid and beneficial effects in all the phlegmasiæ of the digestive viscera.

“In some cases, cold used both internally and externally, has added to the efficacy of emollient drinks and fomentations on the abdomen. This agent may not be sufficiently resorted to by practitioners, in gastro-enteritis, peritonitis, and other abdominal affections. Water, or a gentle lemonade, given cold, might possibly produce salutary effects in cases where the epigastrium is burning and painful, the pulse quick and feverish, the skin dry and warm, heaviness and giddiness in the head. The most violent forms of gastro-enteritis have often been successfully treated by cold drinks. Cirillo, at Naples, gave two pounds of water every two hours, and prescribed a most severe diet in cases of fever; he persevered in this treatment until the appetite returned, and indicated a sensible improvement. The same course is frequently resorted to in Italy, Malta, and in several parts of Spain. Some German physicians have related numerous cases of fevers successfully treated by cold drinks; but all these facts still require the sanction of reason, which determines the seat as well as the degrees of irritation, and analyzes the mode of acting of therapeutical agents in all individual cases. In the present state of medicine, it is no longer satisfactory to say, such a remedy has succeeded against such a disease; it is also necessary to indicate the phenomena attending that disease, the part affected, the constitution of the patient, and to point out, from attentive observation or direct experiments, the effects of the remedy. Without these details it is impossible to give a new trial to the methods that have succeeded in the hands of others, the benefit of their experience is lost to the generality of practitioners, and plans of treatment, otherwise beneficial, may become highly injurious, from the

impossibility of tracing the particular cases in which they have proved successful.

“Whatever inference we may draw from numerous cases in favor of the employment of cold, it cannot be resorted to in gastro-enteritis without great caution. Previous to its administration, it will be necessary to diminish the vigor of the inflammation in the affected viscera, by means of local and general bleeding. The patient's drinks shall then be gradually cooled, according to the sensibility of the patient, observing what effect they produce. Thus, gummy water or lemonade, which were given at twenty-five or thirty degrees, may be brought to twenty, eighteen, fifteen, twelve, eight, six, four, and even to zero. The dose of those liquids should be small but frequent, in order to avoid distending the stomach, and a reaction, which might prove injurious. In several cases, it may be proper to allow ice to melt in the mouth of the patient, during the intervals between the doses. But when the agitation and febrile excitement are great, water proceeding from this melted ice, will become tepid before it reaches the stomach; cold drinks are, therefore, more beneficial, as they reach the stomach in a greater quantity, and without having undergone any change of temperature.

“While cold is thus administered internally, it is proper to apply flannel or linen soaked with cold water on the epigastrium. This again requires a great deal of prudence to prevent any further reaction. Cold must also be applied by degrees, until we may cover the abdomen with a bladder filled with pounded ice, renewing the application when it has melted. Cold enemata might favor the action of those measures, and afford some considerable benefit in acute inflammations of the colon, with or without flow of blood or mucus. These enemata, in small repeated doses, might sometimes prove as powerful as beneficial.

“I must again say that cold, which succeeds in some cases of chronic gastritis, is a remedy which, wisely administered in acute inflammations of the stomach, might favor the effect of depletion, and of internal and external fomentations. It is desirable that this therapeutical agent be submitted to further trials, for ascertaining its beneficial or injurious effects.”

Acute inflammations of the digestive are now considered more in detail, and we cannot suppress some descriptions, both of their character and of their treatment.

“Acute irritations of the stomach and small intestines are susceptible of assuming two different forms which it is necessary to distinguish. In the first, the over excitement is more or less intense, but simple and strongly characterized. It is accompanied with loss of appetite, dislike for food; often, but not always, with pain in the abdomen, dryness, heat, and acrimony of the skin, with vivacity and hardness of the pulse, and with various degrees of cephalalgia. In the second, the inflammation is much more violent; it exerts a considerable influence on the nervous system, and consequently on all vital actions of the animal economy. Then we may observe those symptoms of prostration and sinking which authors

have denominated adynamy, or those of uncommon irregularity in the nervous functions, the secretions, and muscular motions, the whole of which constitute what was formerly designated by the name of ataxy.

“The former of these two forms comprises all those numerous varieties of gastro-intestinal excitement, which are to be observed from a simple indigestion, or an ephemeral stimulation, to those more strongly characterized irritations called, by nosologists, foul stomach, mucous, bilious, ardent fevers, &c. These affections most commonly precede those serious diseases called adynamic and ataxic fevers, which are generally no more than the result of the exasperation of the former. They are seldom primary diseases, except in those constitutions which, being exhausted by hard labor, want to sleep, ill conditioned food, excesses, or large and abundant evacuations, are already laboring under an irritation of the nervous system, and which experience, to the highest degree, the effects of gastric over excitements.

“With regard to those gastro-enteritis called typhus, yellow fever, plague, they are the result of an impression made on the living organs by miasmata arising either from men or animals crowded in narrow confined places, or of vegetable or animal substances putrefied under the action of intense heat. The influence of putrefaction on this development is such, that the injection into the veins of a certain quantity of putrefied blood, or of water impregnated with animal matter in a state of decomposition, is sufficient to produce all the symptoms by which they are characterized. M. Dupré has seen an epidemic mucous adynamic fever, or rather an intense gastro-enteritis, arise from the use of water from swamps, where vegetable and animal substances lay in a state of putrefaction.* Inflammations arising from those causes have their seat in the stomach and intestines; but they assume almost instantly a remarkable character of violence, which partakes of the impression produced on the brain and nervous system.

“Whatever be those distinctions, which might be shown to rest on numerous facts, and on the analysis of morbid phenomena, the practitioner, as we have already said, has to make use of debilitants in most of the digestive irritations.

“After a mere indigestion, when the stomach is loaded with food which stimulates it with too much violence, warm sweet drinks, given in large quantities, are the most beneficial. By their influence, the alimentary mass is diluted and rarified, and propelled by vomiting, or through the intestines, where it excites colic pains and some liquid stools. In either case, diet, diluent drinks, and rest, are to be persevered in until the return of appetite, and the disappearance of all symptoms of gastro-intestinal irritation. Leeches are required only when the stomach, having discharged its contents, preserves a certain degree of irritation, which the above means are inadequate to destroy.

“When, after excessive or vicious regimen, the gastric irritation

* Notice sur une fièvre muqueuse adynamique qui régna pendant l'été et l'automne de 1822, et fit périr un dixième des habitans de la commune de Villechétive, département de l'Yonne.—*Journal de Physiologi, et. III.*

is slight, and merely accompanied with redness of the tip and edges of the tongue, with inaction and fatigue in the limbs, without great heat of the skin or febrile excitement of the pulse; in these simple and unimportant cases an absolute diet of twenty-four or thirty-six hours, gummy drink, somewhat acidulated and sweetened, and a moderate exercise, are all that is necessary to restore the stomach to its normal condition. As the irritation disappears, it is proper to give good and easily digested food, such as rice porridge, thin and light feculant beverage; the patient afterwards gradually returns to his accustomed regimen.

“Should the inflammation of the stomach be accompanied with more violent symptoms, the tip of the tongue becomes red; in its middle, and through the mucous and yellowish coat with which it is covered, we find the papillæ tumefied and red; a disposition to become dry is perceivable through all its extent; the epigastrium is burning and often painful; the skin warm, dry, and acrimonious; the pulse hard, contracted, and frequent. It is then necessary to apply fifteen or twenty leeches to the epigastrium, allowing the punctures to bleed freely for some time after their removal. In subjects from seven to twelve years of age, eight or ten may suffice, and in young infants, from three to six. In all cases, the diet should be absolute; sweet, mucilaginous, and somewhat acidulated drinks, are the only substances to be given to the patient. A complete rest of both body and mind, emollient fomentations on the abdomen, mucilaginous and slightly acidulated enamatæ, will most effectually complete the series of therapeutical agents required for the cure of gastritis. It is exceedingly rare, that, administered at the invasion of the disease, this treatment, followed with exactitude, does not make a rapid improvement. Sometimes, however, it becomes necessary to repeat capillary bleeding; for the symptoms which had disappeared, return again, although with less intensity, after the effects of the first leeches have subsided. This return of the disease is not unfrequently occasioned by the officiousness of those around the patient, in giving him broths, even wine, after bleeding has ceased. Nothing can be more pernicious than this indulgence: after depletion, the stomach is more susceptible of congestion than before. It is, therefore, absolutely necessary to insist on the most complete abstinence, on the use of gentle drinks, abdominal fomentations, and rest, until all the symptoms of irritation have disappeared, and even for twenty hours after. I deem this time indispensable to allow the equilibrium to be restored, and the gastric susceptibility to disappear, that the stomach may receive some gentle and lightly nutritive substances.

When the tongue is red, dry, and cracked, the fever high, skin acrid, eyes strongly injected, urine thick, epigastrium very painful, continual vomiting, accompanied with violent retchings, local bleeding must be more abundant than in the preceding cases. Thirty, forty, fifty leeches will be required in adults. In all cases, considerable benefit will be derived from establishing a constant flow of blood by means of fifteen or twenty leeches, which are renewed as soon as they fall, until the symptoms subside. Water, by itself, is

the only drink which the patient can or should take. Fomentations, enemata, complete abstinence even from the most gentle broth, are equally indispensable. It is in these cases that cold, administered with the precautions indicated above, might produce very happy results. This mode of treatment must be persisted in until the symptoms subside and disappear; and the leeches are to be applied as often as may be called for, either by the perseverance of the symptoms, or by their reappearance after the operation of the first bleeding.

“When in women, in debilitated habits, or in those who use vitiated food, or who are submitted to the influence of a damp cold, gastric irritation is unaccompanied with symptoms of a violent external excitement; when the integuments are pale and cold, the epigastrium hardly warm, and more obstructed or embarrassed than painful; when the muscular strength is considerably diminished, the pulse small, feeble, and tranquil, emollient acidulated drinks warm and sweetened are the most proper. The patient must be kept warm in bed, in a dry, elevated and warm room; warm fomentations must be made on the abdomen; hot bricks to the feet, warm bath, and dry frictions on the skin, are also to be prescribed. Should local bleeding appear to be indicated by the age of the subject, and the intensity of gastric phenomena, it should be copious before the pulse has risen, and the heat of the skin increased, indicating that the vital motions have resumed their vigor, and the circulation its activity. In this, as in the preceding cases, the most absolute diet is necessary, until the return of appetite, and the disappearance of all gastric symptoms.

“Antiphlogistics are not contraindicated by bilious taste in the mouth, a yellow tinge of the tongue, of the *alæ nasi* and of the conjunctiva, nor by vomiting of greenish porraceous matter. These symptoms denote the existence of irritation in the liver, and of over activity in the secretory action of that organ; but this affection is subordinate to that of the stomach and duodenum, which being destroyed, the other will disappear without effort, and without exposing the patient to any sort of danger. What authors have called bilious or gastric fever, is nothing else than a more or less violent irritation of the stomach, accompanied with a secondary excitement of the liver; and the means recommended against gastritis are those that are sanctioned by daily experience.

“These remarks are applicable to those cases of gastro-enteritis in which the secretion of the villous coat is especially increased. Diet, and mild acidulated drinks, are the most proper means to evacuate those mucosities from the intestines, the result of their irritation, and constantly reproducing when the vital modification from which they arise is kept up or exasperated by improper remedies. None but blind humorists could have established those barbarous indications, consisting in the expulsion of bile, mucus, saburral obstructions, and other matter by which they thought the body infected, without examining the condition of the viscera, or considering that the tissues, whose action is impaired, should alone be attended to. Let candid physicians compare the results of this method in the various kinds of acute gastro-enteritis, with those obtained by that

perturbating, incendiary, or evacuating treatment, so generally employed in fevers, and let them decide. It is at the bedside that the physiological doctrine is most constantly triumphant.*

“Constipation often attendant on gastritis, disappears as soon as the intestines, which always partake of the irritation in the stomach, resume, as well as the ventricle itself, the normal exercise of their functions. Emollient or honeyed enemata, tepid drinks in abundance, emollient fomentations on the abdomen, are always more efficacious, and attended with less danger and constipation, than the most gentle *minoratives*. In this, as in all preceding cases, the practitioner is to keep in mind that to combat the irritation is the fundamental indication; all those means which can only lessen it are useless; those which may increase it should be altogether proscribed, as they may prove injurious, especially at the commencement of the disease, and when it has arrived at its highest degree of intensity.

“A fixed and permanent pain, with a sense of retraction in the abdomen, and an obstinate constipation, are to be met with in some cases of enteritis; this is the case with the colic of Madrid; it should not be confounded with that species of colic arising from saturnine preparations. M. U. Coste has shown that it is occasioned by the violent and penetrating cold of the nights which, in Spain, forms a particular contrast with the heat of the day; and its effects are the more pernicious, as the people neglect to keep themselves warmly clothed after sunset. This disease, far from being peculiar to Madrid, is frequently met with in all southern latitudes, and especially in those places where atmospheric variations are as sudden and considerable as in the capital of Spain. The treatment of this form of enteritis has been found by M. Coste, and by the best physicians of our army, to be the same as that of all other intestinal irritations. It consists in immersing the body into a warm bath during four or six hours, twice a day; in emollient fomentations on the abdomen, diluent enemata, and mucilaginous drinks. These are the most efficacious, and even the only means by which the patient is to be preserved from those acute inflammations and chronic intestinal disorganizations, which are to follow that disease, when empirically treated by means of stimulants or purgatives.†

“Cholera morbus has the greatest affinity with the colic of Madrid. The causes of both these affections appear identical, and several of their symptoms are precisely the same. In both cases, there is a

* * As these observations of Mr. Begin cannot be passed without a particular notice, I beg leave to refer the reader to my former remarks, where I have taken occasion to speak of the use of purgatives in fevers generally; and it is needless for me to add anything more in this place. Suffice it to say here, that the subject is of the highest moment in therapeutics; and after a diligent enquiry and judicious trial of the method adopted by the French physicians, which is certainly entitled to some attention, let experience decide how far it is applicable to our climates and constitutions.—(Dr. Tessier's Note.)

† *Memoires de Medecine, Chirurgie et Pharmacie Militaires, tome XVI.*

violent pain in the abdomen, prostration of strength, general debility, cramps in the muscles and calf of the legs, contraction of those of the face, &c.; but in the latter disease, the stomach is at rest; there is no alvine discharge, and the intestines appear retracted and motionless; while in cholera the vomiting and purging are incessant. This last mentioned affection is more sudden and more dangerous than the other. Delon relates that in cholera, the Hindoos apply red hot iron to the feet, and give a decoction of rice, which is undoubtedly as efficacious. From the observations lately made in India by M. Gravier, we might suppose that cholera morbus is always the result of a very violent inflammation of the mucous membrane of the stomach, and often of the œsophagus; that general bleeding is highly serviceable when there is a violent excitement of the pulse; and that in more moderate cases, rice water, with an addition of gum, and gently acidulated, given as drink, and in the form of enemata, will generally perform the cure.* To this method we may add emollient applications to the abdomen, cutaneous irritating frictions, long sitting in a bath, &c.

“These means frequently succeed; but experience shows, that in many cases, and in the hands of a great number of practitioners, opium combined with sulphuric ether, has produced the happiest effects. This contradiction is only apparent. We are to resort to antiphlogistics when the patient is vigorous, the phlogosis of the intestines announced by dryness and redness of the tongue, the heat of the skin increased, and the pulse high. Opium, antispasmodics, with warm baths, and frictions on the skin, on the contrary, are more proper in nervous, weak, and almost cold habits, where the circulation appears on the eve of being extinct, or where the excess of irritation in the digestive mucous membrane has been reduced by antiphlogistics. Practitioners in warm countries, and health officers of the navy practicing in India, who have imbibed the true spirit of physiological medicine, can alone elucidate this apparently obscure therapeutical question. Cholera is so seldom met with in our countries, and is so far from possessing the same degree of intensity as in India, that we cannot lay down, from our observations, any positive rules on the most proper mode of treatment.”†

“* Relation d'une epidemie de cholera morbus observee dans l'Inde, Strasbourg. 1824, in-4to.

“† This sheet was about being struck off, when I received the excellent memoir of M. Keraudren on the cholera morbus of India. This learned practitioner says that the disease generally begins by a state of spasm which calls and concentrates all vital actions in the viscera.* The patients are cold, sunk down, their breathing slow, and almost deprived of pulse. They frequently die during this period, and in a few instants; at other times, they recover with the same rapidity; and in a great many cases, they assume the characteristic signs of gastro-enteritis. As long as they remain under the influence of spasms, and the coldness of the skin and insensibility of the pulse announce an approaching dissolution, M. Ke-

“* Du cholera morbus dans l'Inde ou du mordechi, par P. F. Kerandren. Paris, 1824. in 8vo.

It cannot be doubted that the most questionable part of the treatment, is that which requires a perseverance in the same mode, when it has almost proved fruitless, as we will read in the following transcript :

“All the various forms of gastro-enteritis which have just been mentioned, may, according to their violence and the susceptibility of the patient, produce adynamy and ataxy; I mean a general prostration of strength, or unusual and violent nervous phenomena. The treatment of these affections is replete with numberless difficulties. Should the disease be an ordinary gastro-enteritis, tending to assume adynamic symptoms, the active and rational means already indicated will, undoubtedly, check their course and prevent that fatal termination. The antiphlogistic method is here so beneficial, that in the hospitals where it is resorted to, it is extremely rare to see intestinal inflammation terminate in adynamy; while in other institutions, the returns of cases are crowded with bilious fevers or violent catarrhs, which are but gastro-enterites which have been misunderstood or exasperated.

“But finally, when inflammations of the alimentary canal do not give way to evacuations of blood, complete abstinence of all aliment and other exciting substances, and to appropriate drinks; and when, notwithstanding that treatment, the patient sinks, and the internal irritation persists and progresses, what should be the conduct of the physician? The most attentive and enlightened experience directs him to persevere in the antiphlogistic treatment, and attempt to moderate the violence of the symptoms. In such difficult and dangerous cases, the fundamental indication consists in allowing the disease to run through its periods, preventing its increase, and diminishing its intensity, since it is no longer possible to impede its progress. Gummy and gently acidulated drinks, emollient fomentations on the abdomen, leeches applied to the epigastrium, to the groin, or to the anus, act most directly and efficaciously on the diseased parts.

“From my experience, I have come to the conclusion that we

raudren, from the facts observed by MM. Huet, Lefevre, Deville, St. Yves, and other physicians in the navy, prescribe a mixture of laudanum, or solid opium and ether, (liquid laudanum and sulphuric ether, or liquor of Hoffman, *aa.* x. to xx. drops, in one or two ounces of a sweet mucilaginous pisan, taken by spoonfuls,) while, by means of cutaneous frictions, warm baths, sinapisms, and other revulsives, an attempt is made to call the organic actions to the surface. Camphor and rectified spirits of wine, recommended by the physicians of Manille, are to be proscribed; mucilaginous drinks are the most proper to promote the action of opium and of antispasmodics, while they check inflammation in the digestive canal. This treatment has often been successful; but when the pulse rises and the skin becomes warm, without a subsidence of the symptoms, M. Keraudren adds that recourse is to be had to the whole range of antiphlogistic means recommended in gastro-enteritis. It is impossible, at present, to say anything in addition to the wisdom of these precepts. Time and other observations will alone enable us to determine what modifications should be made in the treatment of those affections.—(*Note of the author.*)

ought no longer to make use of copious bleeding, when gastro-enteritis continues its course after the first days, the pulse becoming weak, small, and frequent. These symptoms indicate that the inflammation is extensive and deeply seated, and will be of long duration. It is then necessary to preserve the strength of the patient, while diminishing, on the other hand, the local irritation by diet and emollients; but should an improper use be made of leeches, the patient, as I have already said, might be speedily exhausted, and might sink, in a few days, under the twofold influence of abundant evacuations, and of an inflammation which such means had rendered the constitution unable to resist. This consideration is of great importance in practice; it imposes on the physician a reserve which few of the enthusiasts of our days are capable of observing.

“Tumefaction of the abdomen is one of the most remarkable phenomena attendant on gastro-enteritis which has become uncommonly intense. Everything appears to confirm the belief that this is owing to the inflammation extending to the lower extremity of the small intestines, and especially to the neighborhood of the caput coli, where it seems to excite an abundant secretion of gas—the valve preventing their evacuation. Leeches applied to the anterior region of the right ilium, emollient fomentations and clysters, are the most proper means of combatting this phenomena, which has too long been ascribed to the atony and passive inflation of the intestines.

“Tympanitis, like simple meteorism, is an effect of intestinal irritation. The secretion of gas seems to be constantly going on in the intestines; but the mechanism of their formation, as well as their object, are not yet well understood, and are susceptible of acquiring great energy. M. Bricheau has several instances of tympanitis, proceeding from a contraction of some portion of intestine, or to other obstacles preventing the course of the fæces. Should symptoms of irritation exist, they are to be counteracted by blood-letting from the abdomen, emollient fomentations, and general bathing; and afterwards promoting the evacuation of the stercoral matter, and the contractions of the distended portions of the intestine, by purgative enemata. The first step is always to examine whether any hard scybula exist in the rectum, which are not the most unfrequent causes of tympanitis. When those means have been employed without success, and the disease assumes the chronic state, large blisters on the abdomen may be highly useful. Perforating the intestines, by means of a trochar plunged through the parietes of the abdomen, has been advised by some; but that dangerous operation is inadequate to the cure of the organic lesion occasioning the production of gases. The intestines sympathetically irritated during hysteric fits, may sometimes be distended by gas, but this affection is only transitory, and disappears with the paroxysm of the uterine over excitement.

To direct the antiphlogistic treatment already indicated, we may add, in gastro-enteritis complicated with adynamy, the use of cutaneous revulsives. M. Broussais says that he has almost completely abandoned their employment, owing to their frequently renewing

redness of the tongue, acrid heat of the skin, and frequency of the pulse. But it will be seen, on the one hand, that these reproaches are without foundation, and on the other, that among them some are to be found which do not possess that inconvenience.

Gastro-enteritis combined with ataxy, is seldom anything else than gastro-encephalitis. The nervous phenomena, on which so much has been said, are always the effect of irritation in the brain or its membranes, and not unfrequently in the medulla oblongata and spinal marrow. In these cases, M. Broussais does not sufficiently attend to the cerebro-spinal over excitement, and confines the disease too exclusively to the digestive canal. Experience shows, however, that leeches to the neck, to the temples, or behind the ears, and cold applications to the head, when resorted to at the first appearance of ataxic symptoms, will soon remove them, and restore the affection to the simple condition of a gastro-enteritis. The special treatment of the cases under consideration is limited to the addition of these means to those already indicated.

“These are also the only precepts to follow in the treatment of gastro-enteritis, proceeding from the deleterious effluvia of animal or vegetable substances in a state of putrefaction. The prophylactic rules to be observed in such cases are, to avoid their influence by a strict attention to diet; to keep sober; to abstain from all those causes which may occasion intestinal irritations. Should the disease ultimately break out, the patient is to be removed from the infected spot, into wider and more airy places, free of all incumbrance. Breathing a pure and salubrious air is here the most effectual part of the treatment; sprinkling the apartments with solutions of chlorate of soda or of potass, of which M. Labarraque has demonstrated the disinfecting properties, should take the place of all fumigations, in cases of infection in hospital wards, privies, &c. Their action is more powerful than that of chlorine disengaged in a dry state; they may be renewed as often as is requisite, and they possess the immense advantage of occasioning no stimulation in the thoracic viscera.

“The patients being thus placed in conditions of salubrity, and free from the further action of deleterious miasmata, it is proper to treat their gastro-enteritis in the manner already indicated. The most efficacious means to arrest the progress, or diminish the violence, of the symptoms of yellow fever, plague, and typhus, consist in local bleeding from the abdomen, emollient fomentations, gummy drinks acidulated with orange or lemon juice. M. Fournier Pescay, one of the physicians to whom humanity is most indebted, whom two countries contend with equal pride to call their own, having sacrificed to the one the services of his younger days, while conferring on the other the benefit of his long experience; M. Fournier Pescay, whose fate is blended with that of the old and of the new world, by equally sacred ties, makes use of no other method of treatment, and his practice is crowned with a degree of success heretofore unknown in the country he inhabits.”

Considering *tabes mesenterica*, *diarrhœa*, *hepatitis*, &c.,

as dependent on gastro-enteritis, M. Begin recommends the antiphlogistic and debilitating treatment, also, for them all, without excepting even those cases of protracted chronic irritations, where the patient is nearly exhausted, unless the skin be cool, the stomach free from pain and spasm, and symptoms of fever entirely wanting.

For the treatment of the diseases of the lymphatic system, which is the subject of the seventh chapter, our author recommends a debilitating and emollient treatment. He adds, "that the most efficacious treatment of latent and chronic inflammations of the lymphatics, or of their ganglia, consists in small applications of leeches, repeated at a few days interval, the use of emollient cataplasms, a regular but light regimen, mild drinks, and exercise. It is only when this treatment fails that we should resort to stimulants."

On the subject of syphilis he observes :

"It is impossible to treat of the diseases of the lymphatic system requiring the use of debilitating, without including among them syphilis. This affection is not, however, exclusively confined to the lymphatics. Under the denomination of syphilis, physicians have confounded irritations of all tissues, and of all organs, and attributed them to a common imaginary cause, a syphilitic virus. By attentive examination, we discover that this pretended syphilis is composed of inflammations or ulcerations which, having first appeared in the genitals, are frequently cured simply by local treatment, and general antiphlogistics, and sometimes require the employment of more or less powerful revulsives. The constitution of the subject, the sympathies connecting the genitals with mucous membranes, bones, fibrous tissues, and especially with the integuments, satisfactorily account, in many cases, for the occurrence of secondary irritations, determined by those which had previously taken place. What relation can the lymphatic system have with ulcerations of the prepuce and glans penis, with urethritis, pharyngitis, and with irritations of the periosteum and bones?"

The author also quotes the practice of some English physicians, who rely more on a recumbent posture, confinement in bed, and emollient or resolute dressings, than on mercury; a practice which he highly recommends. He is equally confident in its proper application to buboes. On this subject he says :

"After evacuating blood, emollient cataplasms, or, if the tumefaction is recent, compresses dipped into cold water, often renewed, appear to me the most proper means to be used; leeches and emollients are afterwards repeated, as occasion requires. From what has been observed in the practice of the most eminent physicians, and from my own experience, I feel warranted in saying that this me-

thod will succeed in operating the resolution of the greater number of buboes. It is evidently preferable to the applications alternately cold and warm, generally adopted by the English, wherein the action, being incessantly resisted, must necessarily keep up or renew the irritation, instead of subduing it by a continued debilitating impression.”*

The eighth chapter treats of the debilitating treatment applied to the nervous system. The annexed quotation will convey an idea of the views of M. Begin on this subject.

“Pain existing along the course of the nerves is merely the result of acute or chronic irritations, which often become habitual, and affect the portions of the nerves in which they are felt. Dissection always proves this to be the case, by constantly showing the existence, in inflamed nerves, of bloody injections, serous effusions, and of fibrous, schirrhous, or other tumors, to be the produce of a violent or slow irritation of the affected tissues. These diseases ought, therefore, to be called *neuritis*, and not *nevrosis* or *neuralgia*.”

In all irritations of the nerves, as he supposes the stomach or intestines sympathetically or primarily affected, he proposes first to allay the irritation, and then administer opium in glysters, because its narcotic effect is more certain when applied to the sound parts.

The ninth and tenth chapters, which speak, the first of debilitatingants applied to the vessels, and the second of the whole economy, contain nothing that is not satisfactorily dwelt upon in the preceding ones.

We have now reached the third book, on direct stimulants, which is also divided into ten chapters. The author calls by

“* Among the most important improvements made in the healing art since the commencement of the present century, we must reckon the practice of treating syphilis without mercury. The method is now successfully adopted throughout this continent, and its success among us has equalled that obtained in the old world. But it is somewhat singular that whether lues venerea is treated with or without mercury, the patient can never rely on a radical cure, since we daily see relapses after the most judicious treatment. On the other hand, I have read reports from various institutions in Europe, which are totally contradictory with respect to the frequency of relapses in both modes of treatment. Some reports tend to prove that relapses are more commonly met with when mercury has been used; others again show that they are of more frequent occurrence when that remedy has not been employed. I am not aware that any particular attention has been given in these countries to ascertain the truth; and, if we consider that the people of this continent, in particular, are totally void of that spirit of national rivalry, which has often been so injurious to the cause of science in the old world, we must confess that, as impartiality to one or another system is an essential condition to scientific experiments, none, perhaps, are better qualified to furnish those results which are to be the guide of our practice in this as well as in all other diseases.—(Note of Dr. Tessier.)

that name nearly all the substances of the ancient pharmacopœia, as well as those now in use, namely, purgatives, tonics, diuretics, diaphoretics, emmenagogues, expectorants, narcotics, &c.; though he rejects them all generally, but more particularly those derived from the mineral kingdom; he still admits that some may be productive of beneficial results.

“ We have often said that diseases consist, either in the debility, or in the increased activity of vital action. No one can doubt the propriety of giving stimulants in the former of these conditions; but can they be indicated? and how do they act in the latter circumstances? These questions require a serious investigation.

“ Diseases arising from debility are somewhat rare; they generally constitute latent chronic disorders, unaccompanied with alarming symptoms or immediate danger. They may be divided into two categories, according as they invade the tissues themselves, or merely some of the elements entering into the composition of complex organs, so as to diminish or totally impede one or more of their functions. This distinction is founded upon pathological facts, and it will be seen that, in a variety of cases, it may serve as a guide near the bedside of the patient. Hence, the tissues of every organ, such as the skin, the mucous, serous, and fibrous membranes, the muscles, the vessels, &c., may be flaccid soft, relaxed, thin, void of resistance, and incapable either of acting with force, or of resisting for a length of time the action of external agents: then there is debility, atony, or relaxation of all the parts entering in the composition of the affected tissue. Sometimes certain functions alone become inert, the organ appearing in every other respect healthy. The skin, for instance, without having lost any of its tension and force, sometimes remains pale, scarcely fit for perspiration, and, as it were, deprived of vitality; the mucous membranes, although apparently in a state of health, secrete but a small quantity of liquids, in certain subjects, or show themselves almost insensible to the action of stimulants. The stomach and intestines have been observed to be torpid, languid, and readily distended with alimentary or stercoral matter. Facts of this kind are by no means rare; the sphinters have been seen motionless, the liver secreting but a small quantity of bile, or, failing to give it its usual properties, the heart propelling the blood with scanty vigor, &c. But I have said enough to be understood.

“ Now, the stimulants employed in all those cases may equally be divided into two classes; the first, including those which corroborate and give force to living matter, by increasing its energy, and imparting additional activity to its nutritive process: the second, comprehending the substances that operate in a special manner upon one or another organic element, so as to excite, and give force and durability to, certain functions that have become languid.”

The author strongly reprobates the practice prevailing in Germany, of employing cold lotions and cold bath in variola,

rubeola, and scarlatina. The transient effect of these measures, he says, is also followed, in the parts affected, by a more or less violent reaction, which must place them among the most energetic stimulants. Though he cannot refuse his belief in what Milius, Kolbany, Pseufer, and Frœlich relate of their beneficial effects, yet he deems the trial too hazardous, and prefers the antiphlogistic treatment. He is more favorable to cauterization in the smallpox.

In cases of erysipelas, he approves of the plan suggested by Juan de Herca, of applying in the centre of the inflamed surface a blister, which will determine in the part the formation of an abscess, with or without gangrene of the skin and cellular tissue, where the disease continues to extend indefinitely in spite of the most active antiphlogistics. He also gives his assent to direct stimulants applied in certain cases of affections of the organs of the senses, and of the genito-urinary organs, which form the subject of the third and fourth chapters.

Our attention is next drawn to the use of those agents in the diseases of the respiratory organs, which are considered in the fifth chapter. The intimate sympathetic relation existing between the lungs and stomach is such, that all remedies called expectorants he deems injurious, owing to their irritating first the stomach, and sympathetically the lungs, though sometimes he deems them serviceable. He speaks highly of ipecacuanha in pastilles or syrup, as promoting the expectoration in asthma, and diminishing the violence of the paroxysms. In the croup the only stimulant he allows, and still with great circumspection, is a solution of tartar emetic. The use of mercury in tubercular phthisis is also strongly reprobated.

In the sixth chapter, which speaks of stimulants applied to the alimentary canal, he asserts that,

“As the phenomena of gastric affections become better understood, this general rule will probably be established, that emetics can never be decidedly beneficial, except in those rare cases where the stomach actually contains foreign and irritating substances, which it would be dangerous to leave longer on the stomach. They are to be almost exclusively reserved for bringing on evacuations, the necessity of which is indicated by positive signs; but even then it must be remembered that all emetics are irritating, and that the mildest of them are to be preferred. Whenever the stomach contains poisonous matter, or is overloaded with aliments, titillation of the throat, or copious tepid drinks, are entitled to a decided preference over emetics. Should ipecacuanha, tartarized antimony, or emetine be deemed indispensable, they should be given uncombined with others or among themselves, and in very small doses, in order to

avoid violently exciting the stomach. Experience does not appear to have positively shown that any one of those substances possesses a decided superiority over the others ; but ipecacuanha seems to be milder than the other two."

He allows purgatives also with great caution, where diluents and emollients prove ineffectual, and condemns, as pernicious, the practice of Rasori and the disciples of the Italian physicians, who use tartar emetic in fevers to a great extent. Tonics, however, are tolerated, provided the alimentary canal is perfectly sound, as are also astringents and vermifuges. The same regard must also be paid to stimulants when applied to the lymphatics, the blood vessels, the nervous system, and the whole animal economy, as illustrated in the four last chapters.

The fourth and last division of M. Begin's work, treats of revulsive medications, as applied to one or more of the various sets of organs. On perusing the six chapters of this book, it would seem that the author had been severe in his reprobation of direct stimulants in order to lavish on revulsives all the praise to which stimulants of every kind are so justly entitled. This will, however, appear plausible, when we bear in mind that the only difference existing between direct stimulants and revulsives, is in the former being almost uniformly applied to the diseased tissues themselves, whereas revulsives are exclusively placed upon a sound part, at a greater or less distance from the seat of the disease, though the remedy used may be the same in both cases.

Our limits will not allow us to occupy more space with the present analysis. Those of our readers who feel interested in the subject will be induced to refer to the text. To others we have presented a pretty full summary.

MEDICAL EXTRACTS.

NO. IV.

Remarks on the Worari and Sirvatan.—Centuries have now elapsed since this dreaded weapon, which takes away life like a magic wand, without causing the slightest pang, became known to Europeans, in its effects at least. It is strange, therefore, that the subject should still remain involved in such profound mystery, with regard to the poison, the mavacuri plant which affords it, and that instrument, the sirvatan or blowpipe, through which it is propelled upon the victim.

The question, what plant affords the worari poison, involves, I presume, one of the most interesting enquiries in the whole department of natural history at the present day, and deserves from us a particular and attentive investigation.

Having examined the Mandavacs, Francisco and Domingo, two intelligent Indians, who were born and bred on the spot, of the tribe most famed for producing the most active worari, and who lived in the vicinity of the mountains which produce both the deadly poison and the instrument of its conveyance, I have received from them separately a most correct and satisfactory account of this affair.

These Indians stated, that, both for the mavacuri and sarsa, they go up the Siapo and contiguous streams, or about the mountains of Unturan and of Achivucary, as observed by Humboldt.*

They could give, however, no information respecting the flowers; but they know the plant well, and call it mavacuri: and they state, that it is of the gourd kind, or one of the cucurbitacea, of the size of a large orange, round, and having a hard shell or pericard, which is used at times to contain the poison.

The mahwy, they say, is the plant of which they make the blowpipe for projecting the arrow.

This plant, according to their representation, has large roundish leaves, is jointed, and has slight partitions, like those of the trumpet-tree, which they punch and clear away with long sticks of hard wood, fitted for the purpose. On further conversation with Domingo, it appears to be a species of palm, as, in respect to the texture, leaf, and seed, he compares the different parts to the eta and camawari.

* They persist there is no sarsa in Cassiquiari, nor in the Rio Negro.

On showing him the small pigmy palm growing on the sands of Essequibo, he said it was the wahwy; exactly in respect to the stem; but not the leaf, as that is bifid, and that it was similarly jointed.

The lining tube is of the same material, a junior or smaller plant of the same kind.

In regard to the manufacture of the poison, Domingo and Francisco say, that they, in general, add nothing, though some, to thicken it, add the bark. They merely peel or scrape off the bark, and bruise it well in a mortar. The mass is then put into a funnel or cartocho made with wild plantain leaves, and having a little cotton at the bottom to strain it; plenty of cold water is poured over it; and they proceed in the same manner as in drawing the lixivium of ashes. This infusion is put into an earthen pot (that which is here called a buck pot), and boiled down to a proper consistence.

This was related circumstantially by Domingo and Francisco, separately. They had no idea of the addition of other substances (ants, &c.) serving, in reality, only to dilute, and render the poison less active, as prescribed by the Indians living near our settlement, all of which are but inventions like those of the charlatans of Europe to throw mystery over the affair, and enhance the value of the art. It is very surprizing that men of good sense, like Mr. Water-ton and Mr. Hillhouse, who, as I should suppose, have had opportunities of better information, should have the credulity to notice or respect such fictions.

The following extract of a letter of Mr. J. Forsyth will throw further light on the subject:

“I received your letter of the 30th ult. requesting a specimen of the worari vine. I am sorry it is not at present in flower; but I send you a small branch of it, and two other vines, called worarybally and courampoe, which the Indians use as auxiliaries to strengthen the former. You will also receive two small roots of the worari vine, which will grow if immediately planted; it will require a great proportion of sand mixed with the earth it is planted in, as it is found growing on sand hills.

“The mode of preparing the poison is as follows:—The inner bark or rind of the root (for it is the root only that is used) is scraped off into some vessel. The worarybally root undergoes the same process; but it is the vine itself of the courampoe that is used. To these, mixed together and well boiled down with some water, the Indians add some peppers, and further boil the mass to a thick syrup.

“This account of the process, I have had from the Indians; but they are to bring some of these roots, &c., and make the poison in my presence. I shall, therefore, have it in my power, I hope, hereafter, to give you a more accurate description of this process.”

If such a thing does in reality exist in nature as a direct sedative, in the strictest sense of the term, I should imagine it to be this extraordinary vegetable extract. Its operation on the animal frame is most mysterious. It extinguishes the vital spark without a pang or a struggle, if prepared without any other substance being added,

for the most efficient poison is prepared from the worari vine alone. The sensation and effect it produces are extremely analogous to those which arise from excess of bleeding; the animal, under its influence, sinking from existence in the most placid swoon.

On the Parima, among the tribes the most celebrated for the use of the worari, I was told, that salt and sugar were considered as the best antidotes to this poison. The same was stated to M. de la Condamine, upon the Amazon; but afterwards, if I remember well, it was said to have been disproved by some experiments made in Germany.

I am, nevertheless, inclined to think, that some of the tribes do possess a secret antidote to the worari; for I was assured by the Portuguese, that the Indians of the Rio Negro are in the habit of shooting birds and monkeys with the worari, and afterwards resuscitating and transporting them to Para for sale.

This would be an interesting subject for a traveller to investigate. Could such an antidote be found, as to render the worari manageable, I feel a persuasion that it would put us in possession of a most important medicinal agent in convulsive disorders, as in tetanus and hydrophobia, and in diseases perhaps of an acute inflammatory nature.

Does it kill by the privation of oxygen, the pabulum of the blood, and supporter of vitality?—If this were the *modus operandi*, by which it subverts the living power, its effects might possibly be restrained by inhaling the oxygenous gas, or by cautiously throwing oxygen into the veins.

Be this as it may, it is probable that the same principle belongs to very different plants. If so, an important discovery remains to be made—that of ascertaining the proximate principle, which, acting on the nervous and vascular systems, proves so subversive of animal life.

JOHN HANCOCK.

Brandé's Quarterly Journal.

State of Medicine in Turkey, from Madden's Travels.—Mr. Madden's volumes teem with accounts of the low condition to which medical science is reduced throughout Turkey; and such probably it was throughout all Europe not many centuries back. It has been well remarked, that the state of medicine may be considered as the criterion or barometer of the state of science in any country. Wherever science and refinement have extended their influence, there will medicine be most cherished, as being so eminently conducive to the interests and happiness of mankind. The following lively sketch of the mode of conducting *business* at Constantinople will illustrate this remark:—

“There are about fifty medical practitioners in Constantinople, principally Franks, from Italy and Malta, and a few Ionian Greeks, Armenians, and Copts; of this number there are, perhaps, five regularly educated physicians, and two of these are English gentlemen, highly respected, both by the Turks and Franks. Every *medico* has his allotted quarter; he beats this ground daily in pursuit of patients, and visits all the coffee houses in the district with a

Greek *drogueman*, as interpreter, at his heels, whose occupation it is to scent out sickness, and to extol the doctor. They are ever to be found on the most public bench of the coffee shop, smoking with profound gravity, and prying into the features of those around them, for a symptom of disease. I confess I had to descend to this degradation, to get practice, in order to become acquainted with the domestic customs of the people. The first day my *drogueman*, who had just left the services of a Roman doctor, and had been practising on his own account since his discharge, (for all *droguemen* become doctors,) took upon him to teach me my professional duty, which he made to consist, in never giving advice before I got my fee, in never asking questions of the sick, and in never giving intelligible answers to the friends; I was to look for symptoms only in the pulse; I was to limit my *prognosis* to three words, 'In *Shallah*,' or, 'Please the Lord,' for doubtful cases; and '*Allakharim*,' or 'God is great,' for desperate ones. I took my post in the coffee shop, had my pipe and coffee, while my *drogueman* entered into conversation with the Turks about us."—Vol. i. p. 54.

The story then proceeds as follows:—

"A well dressed man, who had been sitting by my side, in silence, for half an hour, at last recollected he had a wife or two unwell, and very gravely asked 'what I would cure a sick woman for?' I enquired her malady,—'she was sick.' In what manner she was affected,—'why, she could not eat.' On these premises I was to undertake to cure a patient, who, for aught I knew, might be at that moment in articulo mortis. I could not bring myself to drive the bargain; so I left my enraged *drogueman* to go through that pleasing process. I heard him ask a hundred piasters, and heard him swear by his father's head and his mother's soul, that I never took less: however, after nearly an hour's haggling, I saw fifty put into his hand; and the promise of a hundred more, when the patient got well, I saw treated with the contempt which, in point of fact, it deserved. No man makes larger promises than a Turk in sickness, and no man is so regardless of them in convalescence. I visited my patient, whom I afterwards found both old and ugly; but I was doomed, on the first occasion, to see no part of her form; she insisted on my ascertaining her disease with a door between us, she being in one room and I in another; the door was ajar, and her head, enveloped in a sheet, as it was occasionally projected to answer me, was the only part of her I had a glimpse of; this was the only woman I ever attended here or in the islands, who would not suffer the profanation of my fingers on her wrist. I, however, could just collect enough from the attendants, to cause me to *suspect* she had a cancer; and I did all, under such circumstances, that I could well do—I gave her an opiate."—pp. 57, 58.

At page 59 is a well told story of a Turkish consultation, at which the author assisted. Nothing can display more clearly the miserable condition of the medical interests in Turkey than this scene. A host of doctors, Jews, Greeks, Italians, and even Mos-

lems, thronged round the sick man's bed. Among them were jumbled the friends, slaves, and followers of the poor patient. The latter gave their opinion as well as the doctors. But he who took the leading share in the business of the day, was a Turkish priest, who administered to the diseases both of soul and body. After a most unintelligible exordium, oil of wax was proposed, and agreed to. The doctors got their fee, (four Spanish dollars each, the only rational part of the story,) and the patient soon afterwards died. The secret of the Turkish priest's activity then came out. The bulk of the patient's property was invested in a mosque.

The faith of Turks in the power of amulets, fertilizing potions, and *madjouns*, seems to be universal. Indeed, from what we learn in these volumes, the principal business of the doctor is the prescribing of these *efficacious* remedies. "There are few Mahometans," says the author, page 63, "who do not put faith in amulets. I have found them on broken bones, on aching heads, and sometimes over love sick hearts. The latter are worn by young ladies, and consist of a leaf or two of the hyacinth. Sometimes these amulets consists of unmeaning words, at other times of a scroll, bearing the words, 'Bismillah,' 'in the name of the most merciful God,' with some cabalistic sign; but most commonly they contain a verse of the Koran. In dangerous diseases recourse is had to the most potent of all charms, shreds, of the clothing of the pilgrim camel which conveys the Sultan's annual present to the sacred city. The amulet in most common use is an amber bead, with a triangular scroll worn over the forehead. This is probably an imitation of the phylacteries which the Jews were commanded 'to bind for a sign upon their hands, and to be as frontlets between their eyes.'" They are manufactured by Marabouts and Arab sheiks. Some very preposterous applications of a similar kind are occasionally to be seen, such as a roasted mouse laid upon a gun shot wound, and intended to extract the ball. These absurdities, it may be said, only indicate the low state of intellect in the mass of the Turkish population, but it may reasonably be doubted whether the sick would be better off in the hands of the faculty.

Ladies were incessant in their demands upon the doctor for some potion that would ensure fertility. A woman in Turkey has no honor or respect until she prove a mother, and all therefore are desirous of a progeny like Priam's. In spite of the specifics, however, they have in general but few children, for polygamy is undoubtedly injurious to population. But great as is the fondness of the women for medicines to make them fruitful, it is exceeded by that of the men for *aphrodisiacs*, which they denominate *madjoun*. The author was solicited for them in every province of the empire which he visited. It is lamentable to think that hardly a man arrives at the age of five and thirty whom debauchery has not debilitated and made dependent for his pleasures upon this sort of adventitious excitement. The common *madjoun* of Constantinople is composed of the pistils of the flower of the hemp plant ground to powder, and mixed up in honey, with cloves, nutmeg, and saffron.

Every one has heard of the opium eaters in Turkey, and the

author was naturally anxious to inform himself concerning this supposed fascinating practice. The coffee houses where the *theriakis*, or opium eaters, assemble, are situated in a large square, near the mosque of Solymania, and on a bench outside the door, they await the wished for reveries. There the author stationed himself to watch the effects of the potent drug. The gestures of the men were frightful. Those who were completely under the influence of opium talked incoherently. Their features were flushed, their eyes had an unnatural brilliancy, and the expression of their countenances was horribly wild. The effect is usually produced in two hours. The dose varies from three grains to sixty; one old man was seen by the author to take twenty-four grains in two hours. He had been in the habit of eating opium for five and twenty years.

The effects of this practice are painted by the author in the most dismal colors. "The debility," he says, "both moral and physical, attendant upon it, is terrible. The appetite is destroyed; every fibre in the body trembles; the nerves of the neck become affected, and the muscles get rigid," producing wry necks and contracted fingers. Life itself, as we may well suppose, is shortened by it. A regular opium eater seldom lives beyond thirty years of age, if he commence the practice early. The habit, however, is too agreeable to be easily abandoned. The man is miserable till the hour arrives for taking his daily dose, but when its influence begins, he is all fire and animation. Some compose verses, and others harangue the bystanders, imagining themselves emperors, with all the harems in the world at their command.

The following detail of the author's own feelings when intoxicated with opium, is too curious to be omitted. It reminds us very strongly of the inhalation of the nitrous oxide which Sir H. Davy describes as producing a "thrilling, and a sense of tangible extension highly pleasing in every joint." The dose which Mr. Madden took was four grains, shortly after which, he says—

"My spirits became sensibly excited: the pleasure of the sensation seemed to depend on a universal expansion of mind and matter. My faculties appeared enlarged: every thing I looked on seemed increased in volume; I had no longer the same pleasure when I closed my eyes which I had when they were open; it appeared to me as if it was only external objects which were acted on by the imagination, and magnified into images of pleasure: in short, it was 'the faint exquisite music of a dream' in a waking moment. I made my way home as fast as possible, dreading, at every step, that I should commit some extravagance. In walking, I was hardly sensible of my feet touching the ground. It seemed as if I slid along the street, impelled by some invisible agent, and that my blood was composed of some ethereal fluid, which rendered my body lighter than air. I got to bed the moment I reached home. The most extraordinary visions of delight filled my brain all night. In the morning I rose, pale and dispirited; my head ached; my body was so debilitated that I was obliged to remain on the sofa all the day, dearly paying for my first essay at opium eating."—

Early in the month of July, 1825, the author reached Alexandria, where the first thing that attracted his notice was the *climate* of Egypt. His observations on this very interesting topic are somewhat desultory, but we shall extract their substance for the benefit of our readers.

From the 1st of May to the 20th of June an easterly wind blows, called the kamsin, or simoom. It is the poison wind of the desert, and its effects on animal life are oppressive in the extreme. It produces such languor and exhaustion, as made the author often lie for hours on his divan, incapable of the slightest mental or bodily exertion. The sensation was inexpressibly distressing. It was not, however, the degree of heat which occasioned it, for the thermometer is not affected more than five or six degrees during its prevalence. Perhaps some electrical condition of the air may be the real cause of this singular depressing influence upon the nervous system.

The country, which has had no rain since March, is now completely parched up. The soil is split into innumerable cracks. The trees are scorched. The only plant that survives the drought is the alkaline *salsola*, which covers the burning sands. About St. John's day (the 24th of June) the face of nature changes. The northwest, or Etesian winds, begin to blow, and so continue till September, diffusing, at Alexandria, an agreeable freshness in the air. A heavy dew, called the *nocta*, falls also at this time. The drooping plants revive, and pestilence is stayed. Alexandria is at all times very damp. The atmosphere is saturated with a saline vapor, which condenses on the walls and furniture of the houses, in small crystals of nitre, sal ammoniac, and common salt. The soil is everywhere coated with these saline particles, and every thing made of iron rusts. Yet is this saline atmosphere not injurious to breathing: diseases of the lungs are unknown. Except during the prevalence of the Etesian gales, the sky of Egypt is serene and beautifully blue.

All Egypt, in the vicinity of the river, is a lake from the beginning of August to the end of October; that is to say, the Nile then brings down all the moisture which the Etesian winds, loaded with clouds from the Mediterranean, had been carrying up since June. On the subsidence of the Nile, agriculture commences. Early in January, spring puts forth its buds, and in April the first harvest is ended. By a system of irrigation, the country is made to afford a second harvest, which is reaped in August, prior to the overflow.

At Alexandria, the thermometer, during the summer months, seldom exceeds 90°, nor is the heat oppressive; yet, owing to other causes, its climate is the most unwholesome in all Egypt. The principal of these is the vicinity of the lake Mareotis, now a saline swamp. The quarter of the city nearest the lake is subject to intermittent fevers in the spring, and to malignant putrid fevers in the autumn.

The climate of Upper Egypt is singularly dry, yet sycamores, five or six hundred years old, have thriven there without a drop of rain, and some, which are highly situated, without even deriving moisture from the inundation. A sheet of paper may be exposed

there all night without its imbibing a particle of moisture, the *noctua* extending only to Lower and Middle Egypt. In Alexandria, Damietta, and Rosetta, there is more or less rain from November till March, and sometimes excessively cold weather; but in Cairo, though only one hundred and fifty miles distant, there is much less of both. In Upper Egypt there is no rain for six or even ten years, but when it does come, it is in torrents. During the intense heat of summer, many birds leave Egypt, while the swallows of Europe make it their abode in winter. Their last starting place appears to be the Morea.

A medical man travelling through Turkey, must naturally hear much of the plague, but Mr. Madden did more: he saw a great deal of it, and studied the disease with a very proper degree of professional zeal, avoiding, we are happy to say, at the same time, those absurd attempts at bravado, which have cost some English physicians their lives, and others their character for common sense. One of the best chapters in Mr. Madden's first volume is that which he devotes to the subject of plague, (Letter XVII. to Dr. Quin;) and his opinions really appear to us so good, that it is but justice to bring them, at some length, before our readers. The author had some experience of the plague, both at Constantinople and in Candia, but his notions of it were then confused, sometimes believing it to be contagious, sometimes infectious, and sometimes neither the one nor the other. On his arrival at Alexandria, he found the disorder very rife; the natives were perishing at the rate of eighteen per day, and few days passed over without the death of a European.

“For so small a population as that of Alexandria, say sixteen thousand souls, the mortality was considerable; every house was shut up, the servants were not suffered to go out, money was passed through vinegar before it was touched, letters were smoked, papers were handled with tongs, passengers in the streets poked unwary strangers with their sticks, to avoid communication, people thronged round the doctors' shops to know how many died in the night: the plague was discussed at breakfast, contagion was described at dinner, buboes and carbuncles (*horresco referens!*) were our themes at supper. The laws of infection were handled by young ladies in the drawing room; ‘a cat could communicate the plague, but a dog was less dangerous; an ass was a pestiferous animal, but a horse was noncontagious. Fresh bread was highly susceptible, but butchers' meat was nonproductive.’ If you looked at a man, he felt his groin; if you complained of a headache, there was a general flight; if you went abroad with a sallow cheek, the people fled in all directions; if you touched the skirt of a Christian's coat, you raised his *cholera*: and if you talked of M'Lean, your intellect was suspected to be impaired.”

The author visited the plague hospital daily, sometimes taking with him his host, Mr. Casey, whose fears he had somehow contrived to overcome.

“The pesthouse consists of several small rooms, with a grated window opposite the door facing the east, as if intended for recei-

ving the poisonous wind of the desert. There is neither chair nor table in this dungeon; the sole furniture is a cane bed, called a *cafass*, with a mattress, and a sheet, which serves for a shroud a little later. The door is generally locked on the unhappy patient; an Arab attendant sits smoking his pipe outside, and very rarely enters to moisten the burning lips of the sufferer, or to lessen the terror of his solitary confinement; once a day the Italian doctor enters the room; orders a decoction of marshmallows, or elder flower water, and then departs. Of all human horrors, earth has nothing to compare with the dismay depicted on the features of the sick, in these dreadful receptacles of pestilence!"

We would have wished to spare our readers a medical description of the plague, but the history which Mr. Madden gives of it, as occurring in his own servant, is so striking, and so illustrative of the common phenomena of the disease, that we cannot pass it over. He had taken his man with him to a supposed case of apoplexy; it proved to be the plague.

"The second day after this, I observed him staggering as he walked, his eyes had the expression of a drunken man's, his features were tumid, and yet he complained not; I asked him in the evening if he felt unwell? he said he had a cold; but I perceived he could hardly keep his feet: his pulse was very frequent, but easily compressed, and not full; his tongue was of a whitish brown in the centre, with the borders very red.

"I saw the poor fellow had the plague, and I took him to the hospital. When we arrived there, I saw him shudder; (and well he might;) he said to me, 'Don't you recollect, sir, I said, in the *Bazaar*, that health is above every thing?' I never was more uncomfortable; I felt as if I was in some sort necessary to his disease. Headache and nausea distressed him from the time he was put to bed; he shivered frequently, but he said 'his heart was burning.' At night two livid spots were discovered on the forearm, with purple streaks, extending to the axilla and terminating in a bubo. His skin was parched and burning, his eye glaring on one object; and when his attention was called off, he talked incoherently, and complained of his tongue becoming swelled. His pulse, at sunset, was one hundred and eighteen, small and obstructed, his features swollen and of a sallow crimson hue; but next morning his color was of a darker purple, such as denoted congestion somewhere strangling the circulation. His regard was constantly fixed on the ceiling, and the low thick muttering of his lips had been incessant during the night. At four o'clock he bounced out of bed, escaped unnoticed, passed the outer door of the hospital, and ran, naked as he was, several yards in the direction of his home; but here he was overtaken by the people of the pesthouse; he had just snuk down quite exhausted. The strength of death, which had carried him thus far, was now gone; and, with the help of two Arabs, he was borne back to his dungeon, (for it deserved no better name,) trailing his feet, and his head sunk on his bosom. I saw him two hours after this; the bubo was the size of a small orange, the two livid spots had become large carbuncles, his eyes were glazed, yet

unnaturally brilliant, and his fingers were playing with the bed clothes; at dusk the rattling of the throat was accompanied with spasms of the muscles of the neck; these went off, and after a couple of hours, without any apparent suffering, he died."

The author has his own speculations on the causes of plague, and upon the proper mode of managing it. These we think very rational, and deserving of mature reflection. His notion is, that the plague is essentially of *endemic* origin, in other words, that the original miasm is formed by some obscure putrefactive process, and that the atmosphere is only the *medium* by which the poisonous matter, thus eliminated, reaches the human body. He goes a step further, however, than this. Common malaria he believes to be formed from the decomposition of *vegetable* matter contained in the soil. Plague miasma, again, originates in the putrefaction of *animal* matter, the production of both depending on certain states of moisture and heat. But while the author is thus clear in attributing to plague an endemic origin, he is perfectly satisfied that it is also a contagious disorder, and that the contagious emanations from the bodies of the sick may produce the disease in others, in three different ways: first, by contact; secondly, by means of the breath; and, thirdly, by woollen clothes and other *fomites*, which have become saturated with contaminated air. The contagion of plague, according to Mr. Madden, requires to be in a certain state of *intensity* to produce the disorder in others. Hence it is, that, with proper precaution, a pest hospital may be visited with impunity.

"In a word, plague, under all circumstances, is contagious; but under some, far more so than under others. In a well ventilated chamber, where the bed clothes are shifted daily, where the floor is washed daily, and a fire kept constantly in the apartment, (*this I consider the most important agent of all in carrying off the foul air,*) there is hardly any peril in approaching the bedside of the sick, avoiding his breath, and suffering no part of one's dress to touch the bed clothes. At four feet from the bed of the plague patient, in an airy room, there is no danger whatever. The miasma, I have ascertained, by much observation, (so far as an invisible agent is amenable to observation or experience,) does not extend beyond a very few feet from its source; I would say, not four feet from the bedside, and then it becomes so diluted by the surrounding atmosphere as to prove innocuous."

From these statements, it appears that the plague is, in the author's notion, more allied to typhus fever and to ague, than it is to smallpox and measles. It is held by the best physicians, that the two latter diseases are entirely the produce of *vital* actions, and that no combination of agents, exterior to the human frame, can give rise to them. The complete exemption of the world from these complaints for so many hundred years, and the fact that, at St. Helena, they are invariably imported, are decisive, we think, in favor of this doctrine.

On this point, then, we are perfectly agreed with the author. But we have our doubts how far he is right in attributing the origin of plague so exclusively to *animal* decomposition. He strives to ae-

count for it thus: In Turkish towns the butchers kill their meat in the public streets. The streets are never cleansed. Dead dogs, cats, and rats, are constantly putrefying there. The carrion of camels and asses may be seen lying in the great thoroughfares. The Turks seldom change their linen, and in spite of their daily ablutions, are, in reality, a very dirty people. In every town of the Levant, the Jewish quarter is the first affected by plague, and there every description of animal putrefaction is, par excellence, going forward.

We must do the author the justice to say, however, that he does not overlook the facts that seem to associate the plague with some condition of the soil. "It ceases," he tells us, (p. 283,) "when the inundation is established, and begins when the lands have been drained." This he attempts to explain, by saying that the atmosphere is thereby rendered a better *recipient* of the pestilential effluvia which have their *origin* elsewhere; but we can hardly go along with him in this refinement. To all this theory, however, is appended the following very philosophical reflection:

"I am endeavoring to illustrate this scourge of the Levant by facts, for I disclaim all theories. In a science, like that of medicine, where there are no general rules, there can be no unerring and universal principles; and, above all, in an anomalous disease, like that of plague, he who soars into the clouds to analyze the floating particles of miasma; to search after the causes of the *fomcs*, and not to study its effects; to prove that the disease be infectious only, or contagious only; taken only by the breath, or only by the touch; to waste research and learning on mere terms; cavilling about distinctions between endemics and epidemics, but never turning attention to the treatment of the disease; that man, I say, may acquire notoriety, by the novelty or ingenuity of his theories, but he is not likely to lessen the mortality of the disorder."

The opinions which the author has been led to entertain on the treatment of the plague may be summed up in a few words. He condemns bleeding, and all measures of depletion, while he places the highest confidence in strong stimulants, diffusible and permanent. Wine and brandy were his sheet anchors. These he gave from the first moment the patient came under his care, even though the eye was suffused, the cheek flushed, and the skin dry. The first day he gave his brandy and water, one third spirit; the second day he made it half and half; on the third day he contented himself, generally, with keeping up the excitement by strong Cyprus wine. If the patient live to the sixth day, he is very likely to recover. The third is that of greatest danger. By this treatment (with some other items of minor importance) he saved, in Candia, five patients out of nine. Everything, however, he allows, depends on early treatment. So satisfied was he with his success at Candia, that, on his arrival at Alexandria, he proposed to attend plague patients for the season, and undertook to save from seventy to seventy-five per cent. of the sick. The measure, however, was never carried into effect; and we suspect, had the author tried his plan upon a large scale, he would have been disappointed. We are quite ready to admit that the prin-

ciple of his treatment is good, but the virulence and depressing influence of the poison is such, as to bid defiance to all ordinary restoratives. Besides, the plan has been tried and failed. In the Ionian islands, in 1816, the tonic plan was pursued by several practitioners; but the patients died in spite of wine, brandy, and opium.

At Cairo, Mr. Madden visited the lunatic asylum, and he favors us with some interesting observations on the state of eastern countries, with regard to mental alienation. Fanaticism being a great source of insanity in most countries, and religious zeal being very strong in Turkey, one would think, *à priori*, that insanity should there be very frequent. The reverse, however, is the fact. There is very little madness in Turkey, compared with other countries, which the author very reasonably attempts to account for in this manner. Turkish fanaticism is founded on certain essential doctrines of faith, which neither admit of doubt nor disputation, whereas English fanaticism wants all this consoling security: "With us, the fanatic wavers with the wind of every doctrine; and while he works heaven and earth to gain his neighbor to his sect, his own bosom is distracted with a thousand doubts and scruples. His anxiety for his neighbor's soul undermines his own intellect at last: and thus fanaticism paves the road to bedlam."

It is fortunate that insanity is rare in Turkey; for, judging from what the author saw at the lunatic asylum at Cairo, the poor creatures are miserably provided for. The *courbash*, a whip made of one solid thong of hippopotamus hide, was in constant use. When he enquired about their allowance, he heard, to his horror, that there was none except what charitable people were pleased to afford from day to day. The author, very kindly, sent for some food, which the poor creatures devoured like hungry tigers.

"There was one thing I could not help remarking. The ruling passion of the Mahometan character was preserved even in insanity. One man, who begged me to give him bread, spat upon me when he got it; another, who seized on the piece of water melon, which the women brought him, with all the eagerness of famine, abstained from eating it; hungry as he was, he preferred flinging it at a Christian's head, rather than satisfy his craving stomach. He concealed it for near a quarter of an hour, till I was opposite his window, he then thrust his naked arm through the bars, and threw it in my face. In spite of my entreating, he got the *courbash* round his uncovered shoulders."

While travelling in Upper Egypt, the subject of embalming naturally came under the author's notice. He was a diligent investigator of the tombs with which that district abounds; and the following are a few among the interesting observations which his researches led to. The tombs are met with in the Libyan mountain, on the northwest side of Thebes. They perforate the mountain from top to bottom. The lowest are the most highly finished. These are inhabited by the Arabs, about three hundred of whom pass a miserable existence in these sepulchres of pride. The staple commodity of the place (Gourna) consists in mummies, the Arabs

finding it easier to live by selling dead men, than by the toil of husbandry. In the traffic of mummies, however, there appears to be no little portion of fraud; for the author states it as his firm belief, that, in all the cabinets of Europe, there are not, probably, twenty mummies in the same coffin in which they were originally deposited. Having had the good fortune to cure one of the old troglodytes of a bad fever, he gained admission, with great difficulty, to the interior of the principal tomb, and there he found the manufacture of mummies going forward: that is to say, the best mummy cases being laid open, the original was taken out and sold, and its place supplied by one of an inferior kind. A little red paint in a coffee cup set all matters to rights again. From this he proceeded through a narrow passage into another cave, which was literally crammed with mummies. They were lying in horizontal layers, as they had, in all probability, been deposited some thousand years ago. In all the sepulchres which the author visited, he never found one mummy placed upright. Yet Herodotus so describes them. He purchased three mummies from his old friend, all in excellent preservation, for about sixteen shillings, the regular cost price for such articles from the Frank agents being from ten to fifteen pounds. They illustrate the three modes of embalming common among the Egyptians. The first consisted simply of drying. This could not have been practised, generally, in any other country than Upper Egypt, where the dryness of the air is so extraordinary. In Lower Egypt the mummies go to pieces on exposure to the external air; and at Alexandria, where the atmosphere is very humid, mummies, which had resisted corruption in a dry air for perhaps forty centuries, decompose in as many hours. A few places in other parts of the world possess, from local causes, the same antiseptic property. The author mentions, as an instance, the vaults of St. Michael's church in Dublin.

The second mode of embalming, consists in the injection of some antiseptic drugs previous to drying; and the third, which is the most perfect and sumptuous of all, is thus effected: The viscera are removed, and the body sprinkled with aromatics and natron. After drying, it is enveloped in folds of gummed linen, and placed in coffins according to the condition of the deceased. The great principle of embalming is the exclusion of the external air, but much is, undoubtedly, attributable to the agency of antiseptics. The author ascertained that one of the principal ingredients in the mummy balsam was colocynth powder. The same drug is employed in Upper Egypt for destroying vermin in clothes, presses, and store rooms; and the ostrich feathers sent to Lower Egypt are sprinkled with it. In the head of a mummy, of a superior kind, he met with a balsam in color and transparency like a pink topaz. It burned with a beautiful clear flame, and emitted a very fragrant odor, in which the smell of cinnamon predominated. In the heart of one of the mummies he found about three drachms of pure nitre; the heart being entire, this must have been injected through the blood vessels. Mummy powder was formerly in use all over Europe as a medicine, and, according to the author, is still employed as such by the Arabs,

who mix it with butter, and esteem it a sovereign remedy for internal and external ulcers.

Another topic of enquiry suggested to the author, by his residence in Upper Egypt, was the question, who are the descendants of the aboriginal mummified Egyptians? To decide this point, he made a collection of the skulls of the various inhabitants of Egypt—Turks, Jews, Copts, Arabs, and Greeks, and the following are the conclusions to which he came. The old Egyptian head is of so peculiar a form, that it would be impossible to confound it with the Turkish, Grecian, or Arabic head. It is extremely narrow across the forehead, and of an oblong shape anteriorly. Among the many thousand mummy heads which he examined, he never found one with a broad expanded forehead. In phrenological language, those anterior organs which mark the seat of the reasoning powers were not well developed.

Niebuhr, and most other travellers, have stated the Copts to be the great body of the descendants of the Egyptians; but this the author will not agree to. The Coptic head is altogether of a different form. A line drawn across the orbits from one external angle of the eye to the other, is in the Copt half an inch longer than the same line of the mummy head. Herodotus describes the old Egyptians, among whom he was actually residing, as a people of black skins and short woolly hair. The Copts have neither the one nor the other. They were, in all probability, adds the author, a colony in Lower Egypt, in the time of the Egyptians, speaking their language, but not of their race.

“It is among the Nubians,” says Mr. Madden, “that we must search for the true descendants of the Egyptians; a swarthy race, with wiry hair; surpassing, in the beauty of their slender forms, all the people of the east; living on the confines of Egypt, whither, probably, their ancestors had been driven by the Persians, and possessing a dialect which, though mixed with Arabic, no Arab understands.” The measurement of the Nubian head corresponds with that of the mummy in every particular.

Having completed his survey of Egypt, the author prepared to visit Palestine. His journey across the desert, tedious and painful as it was, afforded him the opportunity of making many interesting observations. These we must here endeavor to abridge.

Leaving San in company with his Bedouin guides, he started for Suez on a camel. The soil, for the first fifteen miles, (as far as Salehie,) was covered with a saline crust like hoar frost, which impeded vegetation, but did not altogether prevent it. The true sandy desert begins at Salehie, a string of miserable villages, with a population of about 8000 souls, shaded by a long row of date trees. A party of Bedouins, encamped in the neighboring plains, received them kindly. A kamsin wind set in the following evening, attended with its usual debilitating effects. The sun was obscured with yellow clouds; the air was loaded with particles of sand; breathing became difficult. Sand was driving in furiously with the wind through every crevice in the tent, penetrating books and clothes, though tied up in a hair skin sack; it even got into the author's

watch case. The thermometer, at two o'clock, stood at 110° in the shade, and in the sand outside the tent, at 135° . The tent itself was like an oven. Starting at dawn next morning, our traveller soon lost all trace of vegetation; and he often wondered how, without landmark, trace in the sand, or compass, the Bedouins contrived to follow the proper route. Their whole study seemed to be to keep a straight course, occasionally looking back to observe their track, and to correct any little deviations. The *wadys* or wells where they took up their stations for the night, afforded some bad water. The dew which then fell was heavy. The Bedouin maxims for preserving health in the desert, are highly extolled by the author. They are—never to drink in the day time, nor to sleep with the head uncovered. The more a traveller drinks during the day, the more thirsty he gets; at night he may drink to his heart's content. The Bedouins seem to follow the example of their camels, and lay in, over night, a stock of water for the next day's journey. The author is half inclined to attach some value to the Arab notion of a morbid influence in the moon. Ophthalmia and catarrh are especially considered to be owing to moonbeams. "Strange as this may seem," says the author, "I really believe there is some influence more than that of common dampness in the nights here." He was strangely perplexed with that singular phenomena of the desert, the *mirage*; but this we must allow him to describe in his own animated language.

"We had now journeyed in the wilderness three days without meeting a human being, and without seeing any living creature. With all my endeavors to resist the delusion of the *mirage*, I found it quite impossible, this day, to persuade myself that my senses did not deceive me. At one moment, the rippled surface of a lake was before my eyes; at another time, a thick plantation appeared on either side of me; the waving of the branches was to be seen, and this view was only changed for that of a distant glimpse of a city: the mosques and minarets were distinct, and several times I asked my Bedouins if that was not *Suez* before us; but they laughed at me, and said it was all sand; and what appeared to me a city, a forest, or a lake, the nearer I endeavored to approach it, the farther it seemed to recede, till it at last vanished altogether, 'like the baseless fabric of a vision, leaving not a wreck behind.' If I were to speak of the nature of the *mirage* from my own sensations, I should say it was more a mental hallucination than a deception of the sight; for, although I was aware of the existence of the *mirage*, I could not prevail on myself to believe that the images which were painted on my retina were only reflected, like those in a dream, from the imagination; and yet so it was."—Vol. ii. pp. 199, 200.

The theory of the formation of a sandy desert occupied the author's thoughts. Whence came the accumulation of sand? Did it always exist there, and occupy the same extent of surface? or can its origin be traced to depopulation and the want of cultivation? The sight of the wide ocean of the wilderness naturally suggested these questions, but their solution, says Mr. Madden, is far from being easy. He scouts *Dessaix's* notion, that nature, having expend-

ed all her art in perfecting the rest of the world, left the desert but half made up; and throws out the following for want of a better explanation:

“The deserts, I imagine, from the peculiarity of their situation, were the last places from which the waters of the deluge retired; consequently the deposition of sand, in those places, was much greater than elsewhere. This sand is identical with that of the ocean; it is formed of the same transparent particles of quartz and silex. In all probability, in ancient times, it did not occupy the tenth part of the surface which it now does; but when population diminished and cultivation ceased, the sands in the interior were dispersed by the prevailing winds, particularly those of the north and west, over the plains; and the soil, for want of irrigation, became an arid surface: plantation, which above all impedes the accumulation of sand beyond it, when no longer attended to, favored the desolation of the land.

“On the sea coast, particularly of Egypt, the flatness of the country allows a free passage to the winds, which come loaded from the shore with particles of sand. This I particularly remarked on the shores of Rosetta and Damietta, near the Boghas, the setting up of a small stick on the shore would be a sufficient *nucleus*, in the course of a few months, for the formation of a mountain of sand. One thing is certain, that wherever there is water, no matter in what part of the wilderness, there vegetation is to be found. The stopping up of canals, and the wants of irrigation, are the great causes of desolation which favor the extension of the desert. The country from San to Salehie, and probably to Suez, was formerly a cultivated country: the ruins of palaces, such as those of Zoan and that of the *Beit Pharoon*, now in the middle of the desert, prove that the country around them must have been cultivated, and that, at a very short period before our era.”

The latter half of the second volume is occupied with some very interesting pictures of the holy land. We can only find room, however, for the following sketch of the Dead Sea, or the sea of Lot, as the natives call it. From the summit of a sterile rock, he first looked down upon the glossy lake, three hundred feet below him. The towering mountain on the opposite coast, appeared almost ten miles distant.

“The moon was shining in all her oriental splendor, on the desecrated scene; the shadows of the rugged promontories around me were reflected on the lake; but on its surface not a ripple was to be seen; the silence of death was there, and the malediction of heaven was written on the soil! For miles around me, there was life in neither air, earth, nor water. I sickened of the prospect, my spirits were completely overpowered.

“I reposed on the bare rock for half an hour; my feet were cut in many places with the sharp flints which abound here, and it was with difficulty I could descend the mountain. About six in the morning I reached the shore, and, much against the advice of my excellent guide, I resolved on having a bath. I was desirous of ascertaining the truth of the assertion, that ‘nothing sinks in the Dead

Sea.' I swam a considerable distance from the shore ; and about four yards from the beach I was beyond my depth ; the water was the coldest I ever felt, and the taste of it most detestable ; it was that of a solution of nitre, mixed with an infusion of quassia. Its buoyancy I found to be far greater than that of any sea I ever swam in, not excepting the Euxine, which is extremely salt. I could lay like a log of wood on the surface, without stirring hand or foot, as long as I chose ; but with a good deal of exertion I could just dive sufficiently deep to cover all my body, but I was again thrown on the surface, in spite of my endeavors to descend lower. On coming out, the wounds in my feet pained me excessively : the poisonous quality of the waters irritated the abraded skin, and ultimately made an ulcer of every wound, which confined me fifteen days in Jerusalem ; and became so troublesome in Alexandria, that my medical attendant was apprehensive of gangrene."

On the shores of the lake, the author found several fresh water shells, and the putrid remains of two small fish, which he believes to have been carried down by the Jordan ; for he is convinced that no living creature is to be found in the Dead Sea. He spent two hours in fishing, but he only caught some bitumen. The face of the mountains and of the surrounding country, bore to him all the appearance of a volcanic region, though he confesses he neither found pumice stone nor genuine black lava. The soil was covered with white porous stone and red veined quartz. On the mountains on the western side of the lake were large quantities of the stink stone, the recent fracture of which produces a strong smell of sulphuretted hydrogen. The surface of the water on these shores is covered with a thin pellicle of inflammable asphaltum. This proceeds from fissures in the rock on the opposite beach. After coagulating in the cold air, it cracks in pieces with an explosion, and is drifted over to the western beach. On coming out of the water, the author found his body coated with it, and likewise with an incrustation of salt, about the thickness of a sixpence. The rugged aspect of the mountains, the terrible ravines on either shore, the romantic forms of the jagged rocks, all prove that the surrounding country has been the scene of some terrible convulsion of nature. I have no hesitation, adds the author, in saying, that the sea which occupies the sites of Sodom and Gomorrah, Adam, Seboim, and Segor, covers the crater of a volcano ; and that, in all probability, heaven made that mode of destruction the instrument of divine vengeance. A bottle of the water of the Dead Sea, which Mr. Madden brought home with him, was analyzed last winter by Dr. William Gregory, at the London University. The following is his analysis :

" Chloride of sodium, with a trace of bromine	9.58
Chloride of magnesium	5.28
Chloride of calcium	3.05
Sulphate of lime	1.34

19.25

"The most extraordinary circumstance, perhaps, to be remarked

is, that there is no visible outlet to the lake, notwithstanding that the Jordan is continually flowing into it. Dr. Shaw calculates that the Jordan daily sends into the Dead Sea six millions and ninety thousand tons of water, and yet there is never any visible increase or diminution in the height of the water, though Chateaubriand erroneously states that it varies at different periods. Its greatest breadth does not exceed ten miles, and its extreme length is about seventy.”
—*Brande's Quarterly Journal.*

MEDICAL BIOGRAPHY.

MEMOIR OF M. CORVISART.

BY BARON CUVIER.

Jean Nicholas Corvisart, was born on the 15th February, 1745, at Drycourt, in the department of the Ardennes, whither his father, an attorney at Paris, had retired, during one of those banishments of the parliament which the quarrels of that body with the clergy so frequently occasioned during the reign of Louis XV. The duties of an attorney, exercised with talent and probity, yielded sure profits, and would have enriched M. Corvisart, the father; but he is said to have had a passion for painting, without knowing much about it, and, what he gained by defending his clients, he laid out in purchasing bad pictures. Being not more skilled in human nature, he for a long time persisted in wishing his son to follow his own profession, and kept him for whole days copying law papers. The young man, who was of a lively and ardent disposition, felt that he had been born for less monotonous occupations. A vague uneasiness disquieted him, his law studies became every day more insupportable, and, perhaps, he would have fallen into great irregularities, had he not, on one of those festive rambles in which he indulged himself, whenever he could escape the eye of his father, entered by chance the lecture room of Anthony Petit, one of the most eloquent men who have been professors of anatomy and medicine during the eighteenth century. On hearing the impressive discourse of that master, and attending to the majestic developement of ideas whose novelty equalled their extent, the young Corvisart recognized the profession for which he was designed. He longed to study the animal economy, and for this purpose he determined to be a physician. From this moment, despatching early in the morning the writings which his father had prescribed for him as the work of the day, and requesting the clerks, his companions, to keep his secret, he occupied all the hours he could spare in attending the lectures of Petit, Louis, Dessault, Vicq d'Azyr, and our estimable fellow member, M. Portal. His father at length perceiving his want of assiduity, enquired into the cause of his conduct, and discovered it; but, finding that it was now too late to restrain him, he permitted him to direct his whole attention to his new career. The academy has possessed many members, whom an irresistible propensity has thus

led to escape from the more humble plans which their relations had formed for them, and this perseverance in seeking a profession, in defiance of all obstacles, would undoubtedly be a good test for the choice of one; but how many young persons would be found whom these obstacles would not completely arrest, or who would not enter on courses worse than idleness or irresolution?

The mode of teaching medicine was then very far removed from the extent and regularity which it has since attained. The faculty of Paris, an ancient body, organized in the middle ages, had scarcely made any change in a system of government that dated back five centuries. With the title of Doctor, all its members received the right of teaching; but they did not become bound to teach. It was only by chance that a sufficient number ever devoted themselves to the task of insuring a regular course of lectures to youth.

Some professorships were, indeed, instituted in the faculty, but their fee was wretchedly small. The professors were changed every two years, the younger doctors being made to occupy these chairs in regular succession. They hastened to get through the drudgery, in order to acquire the title of Regent Doctor, and, entering on office without the preparation of study, they retired without having formed themselves by practice. Besides, there were no public lectures at the beds of the sick. In order to see a few patients, the students accompanied the elder physicians in their visits; afterwards, when these elder physicians were unwell, or too much busied with practice, they acted for them, and thus they continued, till at length they, too, slowly attained their professional rank.

M. Corvisart, to whose ardent genius this tedious progress could not fail to be singularly disagreeable, had yet the patience to conform himself to it in every point; but he chose his masters as a man destined to become one himself. Desbois de Rochefort, chief physician of La Charité, and Dessault, chief surgeon of the Hôtel Dieu, in the healing art two of the most eminent men of their time, became his principal patrons. It is well known that Desbois de Rochefort had the great merit of first showing the example of regularly delivering clinical lectures in his hospital. Under his guidance, M. Corvisart for several years occupied himself in the observation of diseases, and in the opening of bodies. For this task he had a real passion. The melancholy spectacles which it displays, the dangers to which it is liable, neither repelled nor discouraged him. A puncture which he had received while dissecting, brought him almost to the point of death, and he is said to have escaped only through the assiduous care which Dessault lavished on him. He also, at a very early period, delivered in his own house lectures—not on medicine properly so called, (for he did not think that so young a doctor could conscientiously do so,) but on anatomy and physiology; and his perspicuity and ardor attracted a crowd of hearers. Nothing more was wanting to him, but to be himself at the head of an hospital, where he could freely pursue the views which his growing experience suggested to him. The first masters of the art judged him worthy of one, and he thought himself on the point of attaining this object of his wishes, when a cause the most trifling

in the world, kept him back for several years. The customs and dress of physicians were scarcely less antique than the system of government of the faculty. If Molière had made them lay aside the gown and the pointed cap, they had at least preserved the full bottomed wig, which no one else any longer wore, and it was on entering into office that they had to muffle themselves in it. It is affirmed that M. Corvisart and M. Hallé were the first who gave the scandal of not assuming it, and that this levity, as it was called, proved very hurtful to them. It is at least certain, that, on the occasion of which we speak, it was the cause of M. Corvisart's disappointment, and that through the person from whom he had least reason to expect it. A celebrated lady, whose husband was the cause, at least the incidental cause, of the greatest innovations that have taken place in France since the establishment of the monarchy, had just founded an hospital, and M. Corvisart ardently wished to obtain the charge of it; but he presented himself in his natural hair, and this innovation she dared not take upon herself to countenance. At the first word she declared to him that her hospital should never have a physician without a wig, and that it was for him to choose between that head dress and his exclusion. He preferred keeping his hair.

By a happy contrast, and when probably he had not greater expectations, it was a monk who, on another occasion, did him more justice. On the death of Desbois de Rochefort, which happened in 1788, the superior of the ecclesiastics attached to the Hôpital de la Charité, a man held in great estimation for his wisdom and his zeal in favor of the sick, and who had been daily witness of M. Corvisart's assiduous cares, employed his credit in getting him attached to that house, and succeeded in the endeavor. From this time, M. Corvisart, continuing the clinical instructions of his predecessor, saw all the young physicians attend his lectures. He excited admiration by possessing in an eminent degree the talent of discovering from the first moment the nature of diseases, and of foreseeing their progress and event. His fellow practitioners were not slow in doing him full justice, and he was already considered as one of the first masters in the capital, when, in 1795, Fournroy procured a chair to be founded for him in the New School of Medicine. Two years after, in 1797, he was appointed to the professorship of medicine in the College of France, and there found himself in the capacity of teaching the art in a theoretical point of view, as he had hitherto shown it practically. The same pupils who heard him in the one school explain the general principles, went to see in the other their happy application, and in all things found him correct, ardent, and obliging in the highest degree. In everything, his pleasing eloquence, his lively temper, his sure and quick tact, excited the highest admiration. If any one had a feeling of repugnance to an art condemned to witness such melancholy scenes, he had only to hear M. Corvisart for some time, to become an enthusiast in it.

Already all Europe rung with his fame, when, in 1802, he was raised to the highest post in his profession, and yet this elevation was

not alone the result of his renown. Every one remembers that it was put to the proof, and that, on being called into consultation respecting an affection of the chest, which threatened the chief of the government, he first discovered its cause and effected its removal.

His success, however, had not inspired him with an implicit faith in medicine. It is even said that the mistakes which, notwithstanding his great sagacity, sometimes happened to him, gave him the greatest vexation, and made him, in those moments of discouragement, speak ill of his art; nor did he, like those works in which it was pretended to assign precise characters, and a regular progress to each disease, and from which young persons might form of medicine an idea similar to that afforded by the physical sciences, properly so called, and still less those in which it is presented in a deceitful simplicity, under the idea of referring diseases and remedies to a small number of forms—it was not thus that he viewed it. Organized beings have their certain laws, each of them conforms to the type of its species; but the disorders which introduce themselves into their organization, are subject to endless combinations; each day this may assume a different complication; and it is from the whole symptoms of each moment, taken together, that they are to be judged of, and combated. Nor did any one pay more attention to these sensible signs. The best physician, according to him, was he who had succeeded in giving to his senses the greatest delicacy. He did not attend solely to the pains felt by the patient, to the variations of his pulse, or of his respiration. A painter could not have better distinguished the shades of color, nor a musician all the qualities of sounds. The slightest alterations of the complexion, of the color of the eyes and lips, the different intonations of the voice, the smallest differences in the muscles of the face, fixed his attention. Even the variations of the breath and transpiration were carefully measured by him, and, in the judgment which he formed, nothing of all this was a matter of indifference. The innumerable openings of bodies which he had made, had enabled him to remark the correspondence of the slightest external appearances with the internal lesions. He is said to have distinguished, at the distance of several beds, the disease of an individual who had just come to the hospital; and, with respect to the disorganizations of the heart, and great vessels in particular, he had attained to a truly wonderful accuracy of divination. His decisions were irrevocable, like those of destiny. Not only did he predict the fate that awaited each patient, and the period at which the catastrophe was to happen, but he gave, beforehand, the measure of the swellings, dilatations, and contractions of all the parts; and the opening of the bodies scarcely ever refuted his announcements. The most experienced, it is said, were utterly astonished by them.

His two principal works, the *Treatise on the Diseases of the Heart*,* and the *Commentary on Avenbrugger*, are celebrated tes-

* *Essay on the Diseases and Organic Lesions of the Heart and Large Vessels*, extracted from the *Clinical Lectures of M. Corvisart*, and published under his inspection by M. E. Horeau. 1 vol. 8vo. Paris, 1806. 2d ed.

timonies of the manner and genius of M. Corvisart. In the first, the inflammations of the pericardium, the dropsies which fill its cavity, the thickening and attenuation of the walls either of the heart in general, or of each of its cavities, the hardening of its tissue, its ossification, its conversion into fat, the contraction of its orifices, its tumors, its inflammations, and its ruptures, are presented, together with their melancholy symptoms, and their fatal results, with an order and clearness that nothing in medicine can surpass. This book so occupied the minds of the young physicians who were eager for instruction, and their imagination was so powerfully struck by it, that for some time, it is said, they saw nothing but diseases of the heart, as at other times they have seen everywhere gravel, bile, asthenia, or inflammations. The effect which it would have on the sick would be still more cruel. His epigraph itself, *Hæret luteri lethalis arundo*, tells how disheartening the reading of it is; but medical books are not made for those who are not physicians; and it is well that those who are so, should know positively when nothing remains for them to do. This unhappy certainty prevents them at least from tormenting their patients with useless remedies.

In the Commentary on Avenbrugger, it is the diseases of the chest, the fluids which fill its cavity, the tumors which obstruct the bronchia, or the cellules of the lungs, that he teaches us to distinguish, by the different sounds which the walls of that cavity emit when struck. The form given to this work ought to be remarked as the proof of a noble generosity. In it M. Corvisart sacrificed his fame, a kind of property of which men are less disposed to be lavish than of any other, to a delicate feeling of justice towards an unknown individual, and one who had been long dead. He had already, from the suggestions of his own mind, made most of the experiments contained in this commentary, and had intended to collect them in a single work, when there fell into his hands a dissertation, published in 1763, by a physician of Vienna, translated in 1770 by a French physician, and yet almost entirely forgotten, in which he found part of what he observed. "I could have sacrificed Avenbrugger's name," says he, "to my own vanity, but I did not choose to do so: it is his beautiful and legitimate discovery that I wish to revive."

These words of themselves describe a character. No one, in fact, was more free, more open, more unassuming; nor could any person be less occupied with himself. Placed so near the man whose word was all powerful, and at the time when so many prerogatives were brought back by little and little, which were of advantage only to those who were decorated with them, how easily could he have obtained for himself the restoration of the ancient privileges conceded to first physicians, so lucrative, but so useless, it may even be said so hurtful, sometimes, to the real progress of medicine. But he was sensible that at the height which the sciences had reached, the exclusive influence of one individual, were he the most skilful in his profession, could only restrain their flight. So far was he from wishing to gain any preeminence, that he did not take a higher rank in his hospital than was due to him in point of seniority. On the

other hand, contrary to the example of those zealous persons who think they shine so much the more when they are surrounded only by obscure individuals, he appointed to the different situations in the medical house, the physicians who enjoyed most reputation in the city. There were in the number some who had written and spoken against him; for even this was not to him a motive of hesitation. Those whose memory alone remained to be honored, the Bichats, and the Dessaults, obtained, at his solicitation, monuments, the only mark which he wished to leave of the favor which he enjoyed. I forget he has given another,—in founding, at his own expense, in the faculty, prizes for the young persons who distinguish themselves by good clinical observations. It has been remarked that many men, on attaining distinction, have remembered the obstacles which poverty opposed to them in their early years, and, by a very natural feeling, have sought to render less difficult the progress of some of their successors. M. Corvisart was led to this the more willingly, that, to his enthusiasm for his profession, he joined a true friendship for those who were possessed of the same feeling. He was jealous of none of his fellow practitioners, and always did them whatever services lay in his power. His greatest pleasure was to see himself surrounded by young physicians who exhibited talent, and it was not with his advice, and with his lectures alone, that he encouraged them; he made them partake the enjoyments of his fortune, and the diversions which a secret inclination to melancholy appear to have rendered necessary to him. It is said, that, when he had performed the duties of his profession, if he did not give himself up to the amusements of gay and enlivening society, he fell into depression of spirits, and painful melancholy; that in him the active and busy physician of the morning, became in the evening a man of pleasure, who would not permit either his art or his patients to be spoken of—a disposition unfortunately too common among men of ardent genius, and which greatly diminished the services which M. Corvisart might have rendered to science. Without hurting his zeal for teaching, which identified itself with his passion for his art, it made him a rather negligent academican, and an unproductive author. After having keenly desired to be admitted among us, he scarcely ever assisted at our meetings. His treatise on the diseases of the heart, although his own in the ideas and in all that forms the essence of the work, did not come from his pen, but was drawn up by one of his pupils, M. Horeau; and if it may be regretted that any one should require such diversions, he was a fortunate man, who, amid all his amusements, was capable of leaving such a monument.

It is asked, and the question naturally suggests itself with respect to many others, if on the frequent occasions when professional duty brought him near a man whose power was unlimited,* he had not some opportunities of giving him advice that might have been useful to himself, and have perhaps spared some of the blood of

* Bonaparte.

Europe? It is certain that he did not allow himself to sink so much as many personages who appeared externally in a higher position, and that whenever, for example, the master showed a disposition to banter him on his profession, a smart reply quickly checked the attempt; but it is also certain that he never conversed about any thing of general interest. On matters of indifference every familiarity was allowed him; but a cold look, or a harsh word, stopped him the moment he tried to break this circle. He himself related, that, at the period of a birth, which, coming especially from such a marriage, seemed calculated to satisfy the most ambitious hopes, he permitted himself to ask if anything more could be desired. *Toujours Champenois Docteur!* was the only reply he received, and the speaker turned his back.

M. Corvisart had applied on himself his inexorable talent of foresight, and had obtained from it but a very melancholy augury. His conformation, and the instance of his father, had given him a presentiment of the apoplexy, which threatened him, and which did not fail to come on nearly at the time that he had foretold it. This cruel disease at first only affected his motions; his judgment remained sound, and the first use which he made of it was to renounce all exercise of his art, and give himself up entirely to repose. But this precaution delayed only for a very short time an attack which proved fatal. He died on the 18th September, 1821, leaving no family.

His place in the Academy of Sciences has been filled up by M. Magendie, and his chair in the College of France had for several years been occupied by M. Hallé.—*Jameson's Philosophical Journal.*

QUARTERLY INTELLIGENCE.

FOREIGN.

ANATOMY.

Human Monster with two Heads.—This is described by Dr. DE MICHAELIS, professor of anatomy and surgery in the Royal University of Sassari, in Sardinia, in the *Annali Universali di Medicina*, for May, 1829. Maria Theresa Parodi, at Sassari, ætat. 32, having borne eight well formed children, was delivered on the 3d of March, 1829, of a female child, the upper part of which was double; it presented with the heads, which were easily protruded, the one after the other; the umbilical cord and the placenta were single. On closer examination, the child was found to be well formed inferiorly up the base of the thorax, which gradually widened, and at the cervical region, gave rise to four well formed arms, and two distinct necks and heads. The following is an extract from the description.

On regarding the anterior surface of the thorax, it appears to form only one cavity, common to both children, the middle of the sternum being somewhat concave, and forming, as it were, a furrow, at the sides of which the sternal extremities of the ribs of both the children meet. In the usual situation there are two mammæ; the right of the right, and the left of the left child; and at the upper angle of the sternum, two well formed clavicles are inserted, which belong to the external upper extremities; besides these, two smaller clavicles are seen rising from the middle portion of the sternum for the internal upper extremities, the shoulders of which are lying very near each other. The necks are quite insulated, and have the two shoulders between them; their two anterior surfaces are directed anteriorly, and toward each other, so that the children, in their natural position, embrace each other with the inner arms. The posterior surface of the thorax exhibits, in its median line, the inner ribs of both children meeting each other, and closing it posteriorly; below these, the hypochondriac regions are completely united, and inferiorly closed by a simple sacral bone, the base of which is somewhat broader than usual. Laterally from the posterior me-

dian line, the two armpits of the inner upper extremities, and the two internal mammæ are seen very near each other; the two spinal columns are slightly converged, till they meet at the sacral bone; the circumference of the abdomen does not exceed that of an ordinary infant of the same age; the navel is in the usual place; the pelvis, and the two lower extremities, exhibit nothing unusual; the external genitals are somewhat lower than usual, the labii and nymphæ are well formed, and cover three apertures, the larger of which being situated in the middle, appears to be the opening of the vagina; the two lower being smaller, must, from their lateral position, be the two urethral openings; moreover, the nurse has seen the urine discharged from both openings simultaneously, from which circumstance it should appear that there is one bladder with two urethræ. The anus is single, and at the usual place.

At the first the health of both children appeared to be equally good; but, at the time of drawing up the report, nineteen days after birth, it appeared that the left was more vigorous than the right; which had an icteric hue, and was affected with slight ophthalmia. The children are suckled by the mother and a nurse; they appear to have a sensation of hunger at different times, from which it should seem that there are two stomachs; the pulsations in the præcordial regions are synchronous; the temperature of the skin, evacuation of the fæces and urine, and sleep are natural. If the genitals or anus be irritated, both children appear to feel it equally.

Since the above was in type, the intelligence of the death of this child has reached us. The head on the right side had been christened Ritta, that on the left Christina. Ritta had been ill for three days, and her illness did not appear in any degree to influence the health of Christina, so that at the moment when Ritta died, Christina was hanging on the breast of her mother and playing with her face. But suddenly she let go, heaved a sigh, and died.

The following are the most interesting details of this truly curious autopsy:—

Upon inspecting the chest, the lungs were found in a healthy state, and of a pretty regular conformation. The right lobe of the lungs of Ritta, and the left one of Christina, were evidently cramped in their development; they were consequently more contracted than their other moiety.

The pericardium was single, but enclosed two hearts so closely connected and bound together that during life the peristaltic motions must have been simultaneous, and consequently confounded. This explains why the stethoscope transmitted but the sound of a single organ of circulation, and shows why, when life ceased in Ritta, Christina was likewise obliged to lose hers; the beating of the heart of one being locked or enchained by the immobility of the other's heart.

The organs of digestion were double, as far as the cœcum. From the cœcum, as far as the anus, there was but a single duct or passage.

There were two livers, but they united into one. The uterus was likewise double.

The opening of the body of Christina Ritta, has not furnished any very precise idea of the nature of the disease by which death was produced. A slight adhesion of the posterior part of the pleura of the right side, with the emphysema of the lungs, indicated the existence of an inflammation of that membrane, but neither intense nor extensive, and not such as could have produced immediate death. Death might rather, perhaps, have been imputed to a considerable accumulation of feculent matter in the rectum. Nothing could have been more easy than to have removed this accumulation, which has produced such an unfortunate result.

The remote causes of the disease by which death was produced may doubtless be traced to the delicate constitution of Ritta, and to exposure to the first colds of winter in apartments very imperfectly heated. It was with difficulty that Ritta supported the fatigue of travelling, while her sister seemed to suffer no sort of inconvenience. In the towns where they were well received, and where they could stay a long time, Ritta recovered her health with surprizing rapidity, so rapidly that M. St. Hilaire says he has observed nothing equal to it in an isolated being, and ascribes it to the support received from her sister Christina, who being endowed with a very robust organization, had no doubt greatly contributed to these sudden restorations. Their stay at Lyons had been very favorable to their health. They seemed even well on their arrival in Paris, although Ritta appeared to be fatigued; but here, when the severity of the season required the greatest care, the relatives, deceived in their hopes by the interference of the authorities, were reduced to a mode of life inconsistent with the care which was necessary for the preservation of their child.

It is known that Ritta only was unwell, and that Christina, whose health was good to the end, was suddenly struck dead, at the moment when her sister expired. The perfect health of Christina is the more surprizing, when it is considered that the accumulation or interruption to which the death is ascribed, was situated in that part of the intestines which was common to the two sisters, but it must be remembered, that an interruption which may be slight and indifferent to a well constituted and even vigorous body like that of Christina, might be serious to one so debilitated as that of her sister. The heart of Ritta, compressed by that of Christina, and otherwise straightened in its movements, found itself incapable of reacting against the congestion produced by the very considerable interruption in the great intestines.

Christina Ritta was evidently not destined to attain an advanced age. There was too much inequality between the two parts, but everything indicates that she might have lived for several years. Her premature death has deprived the world of many interesting observations which might have resulted from the development of two intellects existing, if not in a single organization, at least in two organizations so closely united. Of how many phenomena, psychological, physiological, and pathological, are we deprived? The study of a being like this, arrived at an age when she could account for her ideas and sensations, would be one of the most

interesting which could be offered to the meditation of the philosopher.

The possibility of the prolongation of the life of such a being to mature age appears to be demonstrated, and there is no longer any reason to doubt the general veracity of the authors who have written on such subjects. Some information has lately been given of a bicephalous girl who died in Hungary, at the age of twenty-one, the death of the two parts not being instantaneous, as in the case of Christina Ritta, but an interval of five minutes having occurred between the death of the one and the other.

Malformation of the Genitals—Hermaphroditism.—An individual exhibiting this unfortunate irregularity of structure was admitted into Charity ward, Sept. 30th, under the care of Dr. Bright. She was suffering under a severe form of fever, which rendered her constantly delirious, and in a few days proved fatal.

On her admission,* more especially when, in order to apply a blister to her head, it was exposed and shaven, every one was struck with the coarse and masculine expression of her countenance: this, and her somewhat square and muscular figure, were all the observations relating to her sex that were made during life; but the post mortem inspection disclosed the following appearances:—

A body analogous to the penis was observed immediately beneath the pubic arch; not free or pendant, but bound down towards the perineum; its length was about two inches and a half, and it terminated in a somewhat bulbous extremity, a little like the glans, but without the usual delicacy of cutaneous organization, without any perforation for the urethra, and without a prepuce. On each side of this body there was a considerable fulness of the integuments, at first view resembling the female labia, but in reality analogous to the male scrotum, as, like it, they contained each a small testis. This separation, into its two halves, of the scrotum, depended on the penis being bound down in the median line, as previously described. The testis were in size like those of a boy six or eight years old, and were connected with vasa deferentia, which were found pervious, and considerably enlarged towards their termination. The vesiculæ seminales were very small; the prostate gland also was remarkably small, and was covered on its sides by a pair of peculiar muscles passing from the rectum to the neck of the bladder. The urethra terminated in the perineum, about one inch from the end of the supposed penis, and half an inch further there was a blind opening, which fancy might call the rudiment of a vagina, but which was probably nothing more than an enlarged lacuna. The tunica vaginalis was continued some distance up the cord, but at the ring was quite closed. There was a very minute trace of cremaster muscle. The pelvic viscera had no female character whatever, and the formation of the pelvis itself approached

* Speaking of her as a *patient*, we adhere to the sex then assumed. She was admitted as Mary Cannon, æt. 55 or 60.

to the male rather than to the female standard. The mammæ were considerably developed, but would have been thought small for a healthy female. The lips and chin were clothed with a few scattered, irregular, curling hairs, not more than are often seen on aged females. The outline of the figure, in its muscular development, squareness, and largeness of limbs, &c., was decidedly more male than female. The cerebellum was natural in structure, and if it differed at all from the usual development, was rather small, but this was by no means distinct. No other peculiarities, either diseased or congenital, were observed in any part of the body.

It appears that in the former part of her life, this hybrid had assumed the dress and habits of a man; at one time working in a brick yard, at another period acting as a groom; then a milkman; and afterwards she kept a green grocer's shop. Her habits and manners were rude and bold, sometimes indicating a degree of derangement; more than once she engaged with success in pugilistic encounters; and it is said, manifested still less equivocally male propensities. For the last seven or eight years she has appeared as a female, calling herself Mary Cannon; and it is odd enough, that she first sustained her new sex at a public house, called "The World turned upside down," where she engaged herself as "maid of all work." She was not, however, fully received by the female fellow servants as one of them; suspicion hung about her, and care was always taken to provide for her a separate bed.—*London Medical Gazette*, Oct., 1829.

Case of General Melanosis.—Professor Lobstien of Strasburg describes in this Journal the following interesting case, where the deposition of melanosis took place throughout a great variety of the tissues of the body. A lady, fifty-four years of age, remarked six years before her death a black spot on the inside of the left leg, at its articulation with the thigh. Gradually the spot became a black wart, to remove which various attempts were made by means of ligatures and various caustics, but which, notwithstanding all the remedies resorted to, continued slowly to increase till in 1827 it attained the size of a hen's egg. It then softened, the skin over it was abraded, fungoid excrescences formed on its surface, a sanious matter was discharged, and around it arose many small hard tumors, some of them flesh colored, and others bluish, but all indolent and insensible. By little and little the disease spread on the leg and thigh; and on the upper and inner part of the latter a very prominent tumor was produced. The liver also became large, and a projection or bump could be felt on its convex surface. Towards the end of her life a great number of little tumors of the same color and hardness with the rest were discovered in the scalp, and one arose in the upper eyelid of the left eye, near its inner angle. Meanwhile the patient became more and more feeble and cachectic, without precisely having fever. The discharge from the principal tumor was fetid, and so great, that in less than an hour it soaked through twelve folds of cloth. Latterly the prostration of strength was such as to render the lady unable to stand. In the three last days of her life there was no pulsation to

be felt in the wrists; the voice was lost; and death was preceded by a desire to vomit and eructations. She retained her faculties to the very last.

The original tumor rested on the ligamentous bands and periosteum of the parts forming the joint; it consisted of fungoid, reddish lumps, agglomerated, and separated from one another by fissures; and it had attained a size considerably greater than that of an egg. The tumors around it were like large warts, reddish yellow in color, and as hard as cartilage. They were so numerous, that on a piece of skin, measuring three inches by two inches and a half, professor Lobstein counted sixty-eight, varying from a line to nine lines in diameter. On a portion of skin from the thigh, measuring six inches by two and a half, he found forty-three small medullary tumors, of a flesh red or bluish color, of the hardness of cartilage, and all filled with a black matter. They were situated in the true skin and cellular tissue, never penetrated the aponeurosis, and were not surrounded by any sign of inflammation. At the upper and inner part of the left thigh, near where the saphena joins the crural vein, there was a mass of six encephaloid tumors, the largest of which was two inches and a half long by eleven lines in breadth, and all of them were softened. The melanotic matter abounded in them all. The vessels behind this mass were not altered in appearance, except that the coats of the saphena vein were as thick as those of an artery. The lungs were crowded with little hard tumors as big as lentils, without their parenchymatous structure being diseased. The liver opposite the gall bladder presented on its convex surface a tumor of the size of a small apricot, which contained a homogeneous matter as black as China ink, deposited in a soft friable tissue. The spleen contained two tumors, one of them eleven, the other seven lines in diameter, and consisting of mixed yellow, gray, and black matter. The right kidney was healthy in structure, but presented at its upper extremity a tumor three inches and a half long, eight inches broad, and an inch and three quarters in thickness, which at first appeared a semitransparent hydatid, but which proved to be a cyst divided into several cells, filled with a black pulpy mass, and having a free communication with the renal vein. The great veins of the pelvis were filled with a polypus blood adhering to their inner surface. When macerated several days, these concretions became fibrine, which in some parts presented a regular stratified appearance.—*Répertoire Général d'Anatomie et de Physiologie Pathologiques*, 1829, *Premier Trimestre*.

PHYSIOLOGY.

On the Aromatic Principle of the Blood, and the differences it presents in different Animals and different Sexes.—In the number of this Journal for January, 1828, some notice was taken of the mode of determining by chemical analysis whether stains on clothes, knives, or other objects suspected to have been produced by blood

are really such, or proceed from other causes. The tests which were described on that occasion, and which were ascertained by professor Orfila, it now appears may be applied successfully after a lapse of months or even years. M. Barruel, however, advances a step farther, and maintains that, by means of an aromatic principle, which he conceives exists in the blood, the chemist may distinguish whether blood has proceeded from the human subject or from one of the lower animals,—what the animal is, from which it has proceeded,—and whether, in the case of human blood, it is that of a man or a woman. He says that some years ago, when he was assisting M. Vauquelin in some of his experiments, he remarked, that when sulphuric acid was poured on the crassamentum of ox's blood, a strong odor of a cow house was exhaled. More lately in analyzing the blood of a man who had poisoned himself with opium, he also remarked, that when sulphuric acid was heated in a matrass to ebullition with the blood, an odor of the sweat of the human male was discharged, of such strength, as to compel him to quit the apartment. This circumstance having brought the former fact to his recollection, he proceeded to make further experiments on the subject, and obtained the following results.

The blood of every animal contains a peculiar aromatic principle, which has the same odor with its sweat and pulmonary exhalation. This principle, while it exists in combination with the blood, has no odor; but when the state of combination is broken, it is volatilized, and then the species of animal may be recognized by the odor evolved. The principle has the most powerful odor in the male of each species. It may be developed either from the entire blood, or after the fibrine has been separated, or from the serosity. The best mode of developing the odor is to pour a few drops of blood into a glass, to add between a third part and the half of its volume of concentrated sulphuric acid, and to stir the mixture with a glass rod; upon which the odor will at once be disengaged. By this simple method M. Barruel detected in the blood of man the strong smell of the male human sweat, such as could be confounded with nothing else; in the blood of woman he found the same odor, but much more feeble; in that of the ox a strong odor of a cow stable or cow dung; in that of the horse a strong odor of horse's sweat or horse dung; in that of the ewe a distinct odor of wool impregnated with its oil; in that of the ram an analogous odor mixed with a strong odor of the goat; in that of the dog the odor of its transpiration; in that of the pig a disagreeable smell of a pig sty; and in the blood of the rat the disagreeable smell of that animal. Analogous results were obtained with the blood of fowls, turkeys, ducks, and pigeons; the blood of a frog gave out a distinct smell of marsh rushes; and that of the carp an odor resembling the smell of the slime which covers fresh water fishes. He farther found, that even after blood had dried on cloth, and remained there for fifteen days, the aromatic principle might be disengaged by moistening the stained portion of the cloth and subjecting it in a glass to the action of sulphuric acid.

The experiments of M. Barruel have been repeated by various

chemists in France, some of whom were unable to procure the results at which he arrived, while others procured analogous results as to many points, though not in every department of the subject. It appears, for example, that the odor exhaled by the blood of men is sometimes not distinguishable from that of women; for it is always strongest in people who have dark hair, so that the aromatic principle in the blood of a dark haired female, and that of a light haired male, do not differ materially. M. Soubeiran, who makes this correction on M. Barruel's conclusions, adds, that he could not always satisfy himself that the smell of the aromatic principle of the blood of different animals was specific and characteristic of the animal. M. Raspail denies the accuracy of M. Barruel's statements altogether. M. Villerme was equally unsuccessful with M. Raspail. M. Lenret goes along with M. Barruel in almost all his propositions, and M. Chevallier seems to have obtained results equally concordant. A remarkable fact is stated by M. Leuret. He sent to M. Barruel the blood of a man, of a woman, of a horse, and of an ox, contained in numbered phials; and M. Barruel distinguished among the blood of the two last, and pronounced that both the two first were human blood; but he inferred, from his experiments, that the male blood was that of a woman, and the female blood that of a man. This error was afterwards easily explained: The woman from whom the blood was taken was dark and of a strong frame, while the man was of a lymphatic temperament, with delicate skin, and no hair on the face. These criticisms on M. Barruel's discovery are contained in the *Annales d'Hygiène, &c.*, for October last, and in the *Revue Médicale* for September. It is added, in explanation of the success of M. Barruel, and the failure of others, that this gentleman has a peculiarly delicate sense of smell. The whole subject is well worthy of farther investigation, as promising to supply the medical jurist with a very useful instrument of research in judicial cases.—*Annales d'Hygiène Publique et de Médecine Légale, Avril, 1829.*

White or Milklike Serum.—By HEWSON and Mr. ANDERSON of Dumfries.—“Although the serum of the human blood,” says Mr. Hewson, “be naturally transparent, and a little yellowish, yet it is frequently found to have the appearance of whey, and sometimes to have white streaks swimming on its surface like cream, and now and then to be as white as milk, while the coagulum is as red as usual. In all these three cases of whiteness, I have examined it in a microscope with a pretty large magnifier, and have found it to contain a number of very small globules, although naturally, when transparent, no globules can be observed in it, notwithstanding what has been affirmed by some authors. These globules differ from the red particles (improperly called globules) in their size, which is much smaller; and likewise in their shape, which is spherical, while the red particles are flat. They agree more with the globules of milk. I have compared them with those of woman's milk, and have found, that in the milk the globules are of different sizes, some being three or four times as large as others, and the smallest

little more than just visible, when viewed with a lens of one twenty-third of an inch focus, while those of the white serum are more regular, and are all of them about the size of the smallest globules of milk. Of this white serum I have met with the following instances in books. In Tulpius, (Ob. l. I. cap. 58,) one instance; in Morgagni, (Ep. xlix. Art. 22,) two; in the Philosophical Transactions, (No. 100 and 442,) some instances; in Skenckius's Observations, (Obs. lib. 3,) two cases are related from other authors. I have likewise heard of the same appearance having been observed by the learned Sir John Pringle, Dr. Pitcairn, Dr. Hunter, Dr. Watson, Dr. Bloomfield, Dr. Grathshore, and Dr. Fothergil of Northampton. And other instances have lately occurred to persons of my acquaintance, who have favored me with a short account of them."

The first of these cases occurred in a woman of twenty-five, laboring under *suppressio mensium* for seven months, discharging blood sometimes by vomiting, sometimes by stool, with pain in the left side and stomach, nausea, lassitude, and sleepiness, and a pulse at 95. For these complaints she lost blood twelve times in the course of six months, and each time the serum was as white as milk.

In the second case, a man of thirty-five, corpulent, subject to bleeding at the nose, and piles, with night sweats, was, after their cessation, attacked by headache for two or three days, followed by epistaxis to the amount of about two pounds. The blood thus discharged was as white as milk. At ten the same evening the hemorrhage returned to a considerable extent; and it was then thought proper to bleed him, which was done to the amount of sixteen ounces, with the effect of producing fainting and cessation of the hemorrhage. The *serum* of this blood was also very white. Two days after, the headache recurred, and the nose began again to discharge blood, the serum of which was no whiter than whey; and the bleeding continued during most of the night to the extent it was supposed of two or three pounds, the serum, though still white, being so much less so that the bottom of the vessel could be seen through it. The bleeding returned repeatedly during the space of eight days, when it stopped spontaneously, the serum having become more transparent towards the last.

In a third case, it occurred in the person of a butcher, tall, of strong make, a hard drinker, who was subject to vomit every morning, took little food, and, though he sweated much, did not waste in flesh. He was bled for slight *asthma*, to which he was subject, and which was always relieved by bloodletting.

In a fourth case, it occurred in a person of full make, but rather muscular than corpulent, laboring under violent rheumatic pain in the hip, for which he was bled three times; and each time the *serum* was as white as milk, but the coagulum of its natural color.

The cases, of which these short abstracts are given, form a sort of introduction to the following one, which has fallen under the observation of Mr. William Anderson of Dumfries.

"A man attached to one of those small shows which travel the

country, applied to me about ten o'clock in the forenoon (October, 1827) complaining of severe pain in the region of the heart, which he ascribed to loud and continued shouting the previous day; pulse small, and rather quicker than natural, accompanied with difficult respiration. I abstracted about a pound of blood from the arm with the effect of relieving him; and before the bleeding was finished, I observed the blood assume a bluish appearance, and was surprized, after it had coagulated as usual, to observe, instead of serum, the coagulum floating in pure *milk*. The man then went to his lodgings, and I was called to see him in about an hour after the first bleeding. The pain had returned in a greater degree than before. A second bleeding again relieved him; and the blood assumed the same appearance as before, and separated in the same manner as after the first bleeding. I enquired if he had been drinking any milk in the morning; he replied, that he had been drinking a considerable quantity about three hours before he applied to me. This man was in good health before this attack from over-exertion, and was completely relieved by the second bleeding. The pain did not return, and he got well and continued so during his stay here.

“I have conversed with several medical gentlemen on this case, none of whom ever met with, or remember of having read of, such a case. I am not aware of any organic derangement that would admit of fluids being received into the circulation in the same state in which they are taken. If fluids enter the circulation in the same state in which they are taken, as this case seems to demonstrate, our present theory of absorption must be wrong; we being led to believe, that, whatever is taken as food, must undergo a certain change before it can be received into the blood vessels through the absorbents.

“*Milk*, of all other fluids, being an animal secretion, is most likely to enter the circulation without requiring any change from the digestive organs, but from this case I am inclined to believe, that other fluids may enter in a similar manner. In this case the milk seems to have entered the circulation in a very short time, between two and three hours at most, scarcely so long as anatomists allow for digestion alone.

“The milk in the above case was not analyzed, but its appearance and consistence were the same as other milk. It remained fluid until it was thrown out, which was several days after it was abstracted. The red part of the blood distinctly coagulated and floating in the milk; and what serum might be mixed with it did not diminish its body of color as water mixed with milk would do. While the blood was flowing it had the same appearance as other blood, and it was only when it began to cool that I first observed the difference. If the person in this case had not been drinking milk a few hours before he was bled, and the same appearances had presented themselves, I should have been at a loss to conjecture what might have caused them; but the rarity of the occurrence, and the bleeding following so soon after having taken the milk, induces me to believe that this alone was the cause; for what else could produce such appearances?”

The cases above narrated show that milky serum is not so rare as Mr. Anderson seems to imagine. We may further add, that we have several times seen opaque milky serum in persons whom we have had occasion to bleed for general dropsy; and several of our professional friends have met with almost every degree of opacity up to the milky appearance remarked by Hewson and Mr. Anderson.

The explanation of this state of the blood is not so easily accomplished. Hewson appears to have at one time thought it depended on the recent introduction of chyle into the blood, before complete hæmatisation.

"When I first saw this unusual color of the serum," he observes, "I was inclined to adopt the opinion of those who have attempted to explain it by the patient's being bled soon after a meal, or before the chyle was converted into blood. But afterwards, on considering the case above related, I found this could by no means be the cause, as none of these patients had taken a sufficient quantity of food to occasion this appearance; on the contrary, most of them had a bad appetite, and had taken remarkably little food, and were subject to vomitings. I therefore concluded it was owing to something else, and what confirmed me in this opinion, was an observation I had repeatedly made in dissecting geese, whose serum I had frequently seen white, while their chyle was transparent; although they had been killed only three or four hours after eating. And as the whiteness, in all cases that I examined, was owing to a quantity of small globules like those of milk, (which are known to be oily,) I concluded that these in the human serum, when white, were oily likewise, and recollecting to have read somewhere of an experiment by which butter had been got from such human serum, I tried, by agitating some of it a little diluted, to separate its oil, or to churn it, but without success. I then inspissated some of it to dryness, and compared it with the natural serum of the human blood prepared in the same way, and found it less tenacious, and much more inflammable; and when thus dried, its oil oozed out so much as to make the paper in which it was kept greasy. Another portion of this white serum being kept some days, putrified, and, when putrid, it jellied as milk does when it becomes sour; but it differed from milk, in being extremely fætid."

He does not, however, positively infer that the recent introduction of chyle may not occasionally color the serum; but if this were the uniform cause, he remarks, we ought see it oftener. The idea that it is occasioned by the absorption of fat, is adopted by the late Dr. Gregory, who used to mention the circumstance in his preliminary lectures, and by whom it is also stated in his *Conspectus*. "Serum aliquando album, instar lactis, observatur, quod ab adipe resumpto, neque iterum in gluten redacto oriri videtur." That it depends on the presence of oil is rendered probable by the observation of Dr. Traill in a former number, and by some remarks which will appear in our next.—*Edinburgh Medical and Surgical Journal*.

PATHOLOGY.

Experiments to show the Noncontagious nature of Yellow Fever.

—We find in one of the foreign journals, the following notice of some experiments made by M. Guyon, physician to the first regiment of Martinique. They are detailed at length in a "*Memoir sur la noncontagion de la fièvre jaune, par M. Lafort, Med. en Chef de la Marine à la Martinique.*" M. Guyon took the shirt of a patient who had just died of the fever, and put it on while it was still soaked with sweat; at the same time he was inoculated with the yellowish matter from blisters, which the same patient had had shortly before his death. He wore the shirt for twenty-four hours, during which time he was constantly observed by medical witnesses. Two days afterwards, he drank about two ounces of black fluid, vomited by a patient who died on the following day. Another portion of the same fluid was rubbed into his arms, and he was also inoculated with it. Immediately after the death of the second patient, he put on his shirt, which was much stained with black fluid, and lay in his bed, where he remained for six hours and a half. He then opened the body of the first patient, whose stomach was found filled with black fluid, inflamed, and with the mucous membrane ulcerated; he was again inoculated with the black matter, and pieces of the stomach were applied over the wounds, which, after twenty-four hours, were found inflamed, and very painful; after three days, these symptoms having disappeared, M. Guyon was perfectly well. All these experiments were made in the presence of the medical officers of the station, and lieutenant general Donzelot, governor of Martinique, vouches for their authenticity.—*American Journal of the Medical Sciences.*

Collections of Pus in the Cavities of the Heart. By M. MARCHAL, interne of the Hôpital des Enfants.—*Case 1.* F. Clementine, æt. 14, of good constitution, but who had not yet menstruated, entered the hospital on the 31st of January, 1828, with almost perfect paraplegia. Caustic issues to the loins and warm vapor douches proving unsuccessful, M. Guersent administered the nux vomica in the form of lavement. The remedy proved of considerable service, and the dose was raised to five grains and a half, when symptoms of gastro-enterite supervened, and its use was abandoned. The symptoms in question subsided under moderate antiphlogistic regimen, but the paraplegia gradually returned, and the patient was soon in the same state as when she was first received in the hospital.

About the month of May, she was seized again with pain in the abdomen, fever, headache, nausea, and diarrhœa, together with cough and much mucous expectoration. Local bleedings were employed without any great effect, but the symptoms were not productive of alarm until after a violent mental emotion, when they assumed an extremely dangerous aspect. The pulse became rapid and extremely weak, the expression of the countenance anxious

and altered; the cough was harassing, painful, and attended with a continual sense of suffocation—the nausea was converted into frequent vomiting of dark colored matters—the diarrhœa gave way to obstinate constipation with violent pain, sometimes in the epigastric, sometimes in the hypogastric region—the surface of the body was cold—the left foot red and extremely painful. The application of external warmth, with derivatives and narcotics, was resorted to in vain, and the symptoms continued unabated for two days, when a copious alvine evacuation procured a temporary calm. They quickly, however, returned with augmented violence, especially the coldness of the lower extremities and imminent sense of suffocation. In a paroxysm of the latter the patient expired at 7 A.M. of the 1st of June.

Dissection. The contents of the cranium were perfectly sound. The spine presented a lateral curvature, but exercised no compression on the medulla, which was free from disease, as were also its membranes. The bronchial glands were large, and the principal divisions of the bronchi were deeply reddened, and filled with a frothy bloody fluid, resembling the expectoration during the two last days of the patient's life. On the left side of the chest were some old adhesions of the pleura, and the apex of that lung presented a tuberculous excavation, surrounded by a hardened mass, in part hepatized, and in part infiltrated with tubercles. The lower lobe was much gorged, and in its centre were several nuclei of hepatization. The right lung was also gorged with blood, and crepitated a little throughout.

The heart was very large, measuring five inches in length from base to apex, and four inches at its greatest breadth. This enlargement depended not only on dilatation of the cavities, but thickening of the parietes: in other words, on hypertrophy with dilatation. The left ventricle particularly showed this alteration, being more than doubled in the size of its cavity, and presenting columnæ carneæ as large as the little finger of an adult. The hypertrophy of the walls of the ventricle was greatest at the base, the apex being thin and weak. The inferior half of the ventricle was filled by a round, white, fluctuating mass, containing in its centre a grayish red liquid, of the consistence of cream, around a sort of nucleus marked with whitish streaks. The mass in question was soft, lacerable, and adhering slightly to the columnæ carneæ, between which it sent prolongations. The rest of the ventricular cavity contained several loose and dark coagula. The aortic opening was so narrow as scarcely to receive the extremity of the forefinger, and the artery itself was of very small caliber. The left auricle was diminutive. The right ventricle was only dilated at its upper part, which was filled by black and soft coagula; across its middle was a transverse band, partitioning its cavity into two; this septum, which does not appear to have been a complete one, was three lines in breadth, and its extremities were continuous with the columnæ carneæ. The right auricle was much distended and filled with black coagulated blood.

The mucous membrane of the stomach and intestines was red-

dened throughout its whole extent. Small round tubercles, the size of peas, were deposited in the cortical substance of the kidneys.

Case 2. Margu rite Menjaud, ten years of age, of weak constitution, was admitted into the H pital des Enfants on the 28th of August, 1828, with stupor, prostration, and other symptoms of severe fever. She had only been ill some days before her admission, and at the end of a month the parents removed her from the house, although she was far from convalescent. In another month, however, they brought her back, stating that the child had suffered from cough and diarrh ea, which had been much worse for the last four days, during which there had been vomiting and palpitations at the heart. In the course of a week, which elapsed between the patient's readmission, and her death, the following symptoms were observed. Pulse not frequent, but extremely small—pulsations of the heart very violent, unaccompanied with any particular *bruit*, but perceptible in the epigastric region, and heard over the whole extent of the thorax—cough constant—sputa viscid, glutinous, and yellow—dull sound on percussion behind and on the right side—absence of respiration, and “*souffle tubaire*” in the same points—slight tremor of the voice—decubitus on the right side—nausea—diarrh ea, and pain over the whole extent of the abdomen. Such were the symptoms observed in the short space of time that elapsed before the little patient died.

Dissection. The substance of the brain was extremely firm. The bronchial glands on the right side were softened, and infiltrated in part with tuberculous matter; on the left they were merely enlarged and red. The two upper lobes of the right lung were crepitant throughout, and contained some gray, semitransparent granules. The inferior lobe was completely hepatized, and contained above, some small tubercular masses; and below, a tubercle the size of a pigeon's egg, and softened in its centre. The right pleural cavity contained some greenish, rather turbid, liquid, and the pleura pulmonalis was covered by a soft false membrane. The right side of the chest was unaffected.

The volume of the heart was at least doubled from the equal dilatation of the two ventricles, without appreciable augmentation of the thickness of their walls. Both ventricles were filled with black clots, “beneath which were seen three purulent collections. One was on the left side, lying on the inter-ventricular septum at about its middle; the others were on the right. On both sides they presented the same characters, being about the volume of a small nut, while externally, in contact with the coagula and column e carne e, and sending prolongations into the intervals between the last. Each pouch, in the interior, contained a fluid, having the consistence of cream, of a dirty yellow color, and entirely escaping on wounding the pouch. The latter was about a third of a line in thickness, of dull white color, slightly rugous, and easily broken.

The mesenteric glands had small tuberculous points in their centre. The mucous membrane of the stomach was softened and wasted in parts. Above the ileo-c ecal valve, was a lenticular ulceration of the small intestine. The mucous membrane of the

valve, the cœcum, and the ascending colon, were uniformly red. The spleen presented in its texture a number of solid tubercular deposits. The same were discovered in the liver, containing in their centre a greenish liquid, resembling in all respects the bile."

These cases may afford matter for some consideration and more dispute. Waving, on this occasion, all other points, we must dwell for a moment on what was discovered in the heart. Abscess in the centre of that organ, though a somewhat startling kind of announcement, has yet been alluded to by authors. Mr. Wardrop, in his edition of Baillie's *Morbid Anatomy*, declares that he has seen "a preparation of a polypus in the left ventricle, in the centre of which was a distinct abscess;" and Mr. J. Stewart relates a case in the *Edinburgh Medical and Surgical Journal* for 1817, in which high vascular polypi were discovered in the right auricle, and either ventricle. We think, then, that taking these facts, and especially that of Mr. Wardrop, in connexion with the two now reported from the *Hôpital des Enfants*, little doubt can remain that either purulent matter, or something so like it as completely to deceive the best informed men, has been found in coagula or polypi, lodged in the cavities of the heart. To this conclusion we must either yield our undivided assent, or believe that Mr. Wardrop, and the medical officers of the *Hôpital des Enfants*, have been themselves misled, or wilfully misled their brethren. The existence of pus is, however, the least of the difficulty; its mode of formation is the rub. Are we to suppose that it is produced in the centre of a polypus, that is to say, in a clot of unorganized matter, by the same sort of process as in organized parts of the living body; in other words, that it is the product of inflammation? Our reason, or it may be our prejudice, forbids the supposition. There were no other marks of inflammation present, no lymph, no injection of vessels, and the symptoms during life differed so materially in the only two cases of which we have given an account, as to disprove, to our minds, the idea of its existence.

Whoever has examined many polypi of the heart, must have noticed that they frequently vary in their consistence. The central part is occasionally softer, and yellow or paler in color than the external, and that to a very considerable degree. It may readily be imagined that such a change may proceed even farther, and instead of mere softening, that actual pus, or something very like it, may be formed, independently of all cognizable inflammation, or of anything akin to such a process. Pus is a product of the blood, and we see no good reason against its formation, under peculiar circumstances, from its matrix, by other means than by inflammatory action. At all events, it is not only more safe, but more philosophical, to conclude that the purulent fluid found in these cases, was the result of some peculiar decomposition or change in the clot itself, than of inflammation resembling that in other parts. Analogy is against the latter supposition, probability in favor of the former.

The reporter of the present cases believes that the pus was formed during life.—*Medico-Chirurgical Review*, Oct., 1829, from the *Journal Hebdomadaire*, No. 25.

Case of Vagitus Uterinus. (In a Letter to Dr. Duncan from Dr. A. F. Holmes, Lecturer on Chemistry and Materia Medica, McGill College, Montreal.)—Having lately met with some discussions on the possibility of the fœtus emitting cries in utero, I am induced to send the following case, and to request, if it seems to have anything curious in it, that it may be inserted in the Edinburgh Medical and Surgical Journal. On 29th November, 1828, I was called to a lady in labor of her sixth child. The fontanelle presented, but the pelvis being capacious, and her labors generally easy, no attempt was made to change the position. The head continuing to descend, the mouth lay on the pubis, and the examining finger could easily be introduced into it. The occiput did not yet occupy fully the cavity of the sacrum. At this time I heard sounds like the cries of a child whose mouth was muffled by some covering, but not being very distinct, and not being at all prepared for them, I thought, when they ceased, that they must have been produced by flatus in the intestines of the mother. In the course of a short time, however, the cries were repeated, and with the greatest distinctness, so as not to admit of a doubt that they proceeded from the child. The mother, much alarmed, enquired the cause of these noises, and required to be assured they were not indicative of any danger. The pains being brisk, the head was soon forced down and expelled. The child was a female, and is still alive and thriving. This case appears to me so curious, though easy of explanation, when the position of the mouth is considered, that I am induced to draw up this notice, not having met with anything similar on record, and as it is entirely different from the incredible stories we have of the fœtus emitting cries before the commencement of labor.—*Montreal, August 26, 1829.*—*Edinburgh Medical and Surgical Journal.*

THEORY AND PRACTICE OF PHYSIC.

Cases of the Efficacy of Pyroligneous Acid, &c. By THOMAS Y. SIMONS, M. D., of South Carolina, Physician to the Almshouse Hospital, Charleston, &c.

Case 1. William Smith was brought into the hospital, May 9th, suffering under mania a potu. After he was relieved of this disease, I observed on the anterior part of his right leg a dark spot occupying about two thirds, where a blister had been applied, as he informed me, previous to his entering the hospital. The commencement of mortification was evident, and I ordered him at first bark poultice, not having at that time the pyroligneous acid in the hospital, and the following constitutional treatment—℞. Sulph. quinine, iv. grains; aq. fontana, ℥viiij.; acid sulphuric, xx. gtt. Two table-spoonsful to be given every two hours during the day; at night he was given two grains of opium and five grains of camphor. He was allowed a pint of porter and a meat diet. This course was continued for two days, but without checking the gangrene; indeed it was so rapidly advancing, that several physicians were of opinion

that immediate amputation would be necessary. Having, however, obtained the pyroligneous acid, I resolved to use it first; accordingly, I made free longitudinal and transverse incisions to the full depth of the gangrened portion, and then water and pyroligneous acid in equal portions were applied constantly in the manner already described, and the constitutional treatment was continued. In twenty-four hours a line of demarcation was formed, and in twenty-four hours more the gangrenous portion was separating from the healthy part. In seven days the whole of the gangrene was removed, and a healthy surface was presented. The acid giving pain was diluted to one sixth, and ultimately to one twelfth; and on the 26th September, the patient was dismissed cured. The length of time of healing was produced, I think, from my omitting the acid after healthy granulations were formed, and using the adhesive straps.

Case 2. Edward Campbell, from St. John's, Berkely, South Carolina, came into the hospital on the 24th of August. He said that about Christmas he got a bruise on his shin which he neglected. It was afterwards quacked with by some old woman in the parish, until it assumed the character which I shall now describe. There was an extensive sloughing ulcer, deep, irregular, and jagged, extending from the lower portion of the tibia, two thirds upwards, exposing a part of the bone which was carious, and the tendon of the extensor longus digitorum pedis. The fœtor from the ulcer was so great as to induce me to remove the patient to a place separate from the other inmates of the hospital. My patient was extremely emaciated and hectic, and I observed to the medical gentlemen and students who were present, that I had no hopes of saving the limb, but that it was desirable to place him under constitutional treatment, so that I might improve the conservative principle of the system, (to adopt sir G. Blane's language,) previous to my amputating the leg, and that I would apply the strongest solution of the acid merely to correct the fœtor. The treatment was—R. Sulph. quinine, vi. grains; acid sulph., xx. gtts.; aq. fontana, ℥viiij. Two tablespoonsful every two hours during the day; at night two grains of opium to lessen irritation and procure sleep, which he had not enjoyed for some months. The diet was a pint of porter daily and beefsteak. In two days the fœtor of the ulcer was overcome. In ten days it was much improved, and I took away a large piece of bone which had exfoliated from the tibia. In four days more I removed with the knife a considerable slough of the tendon of the extensor longus digitorum pedis. From this time the ulcer began to improve rapidly, and healthy granulations appeared. This course was persevered in for some time with continued improvement of the leg, when my patient suffered it to be kept hanging down, causing the blood to determine and stagnate at the ulcer, when an extensive sloughing and gangrene commenced, (the acid having then been omitted,) which continued for three days, until the pure acid, (the brown and smoky one having been sent me by the apothecary, which proved inert,) was obtained, which checked its progress in twenty-four hours, and removed it altogether in a week. The patient was made to keep his leg elevated, and the acid was continued

until November 7th, at which time the leg has almost healed, and the acid is omitted.

Case 3. Charles Belton was brought into the hospital on the 13th of September, suffering from the effects of intemperance. I observed a red suffusion over his left thumb with considerable tumefaction; he complained of its giving him great pain; I ordered a poultice of milk and bread. This was continued for three days, when the inflammation increased, became more painful, and tumefied; a fluctuation was felt as if there was matter, and there appeared to be a disposition to point over the second articulation of the thumb. I made a free incision, when very little matter escaped, but a great quantity of blood. On the next morning, I was informed that upwards of two pounds of blood had come from the wound, although I regarded this quantity as exaggerated. I found upon examination the wound had all the appearance of fungus hæmatodes. It spread out on each side of the incision like a mushroom, was fungous, very vascular, and oozing blood at every part. So formidable an appearance in so short a time, left little hopes of relief but in removing the diseased part, which remedy is more than equivocal as regards success. It was, however, suggested to me by a medical friend, that as the pyroligneous acid had proved so valuable and efficacious in the other cases, whether it would not be worthy of a trial in a disease which has generally defied the power of remedial agents.* I readily consented, but with no hopes of success. The acid was applied in its strongest form, which in two days checked the hemorrhage tendency. In fifteen days the fungous character of the wound was subdued, when lunar caustic and adhesive straps were applied, which completed the cure on the 25th of October.

During the prevalence of yellow fever in Charleston, in 1824, I gave the acid much diluted internally during the black vomit stage, but with no benefit. I have no doubt it would prove salutary in putrid sore throats as a gargle, and it would be worthy of trial in cancer, in neither of which have I yet used it.

I have drawn up these cases and observations from a conscientious conviction that a proper use of the pyroligneous acid will be the cause of saving to many human beings limbs which otherwise would be cut off, and with the anxious hope that its use among surgeons may become general.—*American Journal of the Medical Sciences.*

Cases of Ileus cured by Quicksilver.—The old method of treating ileus by large doses of running mercury has long ago fallen into disrepute, and although examples of its successful administration have been published from time to time even in late years, it has not been regarded with any confidence by physicians for a long period. The latest writer on the disease, Dr. Abercrombie, discusses the therapeutic effects of mercury in three lines, stating that he has repeatedly tried it in doses of one or two pounds, and never saw it produce any other good effect except some diminution of the vomit-

* I am not aware that there is another case of cure of this dreadful malady on record.

ing. Dr. Ebers, of Breslau, who, in Hufeland's Journal, has written a long and learned paper on its employment, is of opinion that when used in quantities sufficiently large, it will more frequently prove efficacious than is generally imagined, and, on the whole, conceives that it is a remedy, which, though far from certain in its operation, has been a great deal too much neglected in modern times.

He observes that he has succeeded in curing three very bad cases of ileus with it. Of one of these he unfortunately lost his notes. But the two others are related in his paper at great length. The following is a summary of them :

Case 1. A little weak female, forty-four years of age, and the mother of many children, had been for some years subject to fits of colic, which she usually subdued by spirituous remedies. One of her customary fits attacked her on the 19th September. Next day, notwithstanding the employment of her often tried remedy, the colic was worse, and was attended with constipation. On the night of the 20th, the pain was so excruciating that she cried like a mad woman. When Dr. Ebers saw her at five on the morning of the 21st, she complained every two or three minutes of paroxysms of deep seated violent pain in the hypogastrium, extending over the whole belly, but affecting more acutely the right iliac region, where also there was more tenderness or pressure than anywhere else. She tossed about in bed, and cried aloud. The heat of skin was little increased, the pulse was small and hard, the tongue natural, the breathing quick and anxious, the urine scanty, and the bowels constipated since the 19th. The patient vomited everything she swallowed. There was no appearance of hernia. Dr. Ebers being disposed to consider her complaint an inflammatory colic, directed twelve ounces of blood to be drawn, and ordered first a combination of anodyne and laxative remedies, with a clyster, then sixteen leeches, then more laxatives, then leeches again; next another blood-letting, and again clysters and an anodyne emulsion, all in the course of the 21st. Next morning he found her exhausted by her sufferings, but the fits of colic as violent as ever. She threw herself from one part of the bed to the other, cried out for help, and had an expression of most acute suffering. The pulse was sunk. The pain of abdomen felt on pressure, bore no proportion to the pain complained of as accompanying the spasmodic fits. No fæces has been passed by the anus; but they had begun to be discharged by vomiting, which was incessant. Leeches were reapplied, emollient clysters injected, and anodyne emulsions with cathartics administered, but all without relief. A little laudanum (*ten drops!*) was tried, then croton oil with senna electuary, but still without avail. At night the abdomen had enlarged greatly, was more tender, and gave an impression of doughiness when handled. Croton oil and calomel were ordered, and frictions with croton oil and hyoscyamus, also fomentations, and oleaginous clysters. The oil of the clysters was discharged by vomiting. Next morning, the 23d, no amendment had taken place. Fæces and oil were discharged by the mouth, but no stool had been procured, and hiccup had commenced.

Dr. Ebers then considering the case almost hopeless, administered an ounce and a half of quicksilver, and after it ten drops of laudanum, with several small doses of a cathartic emulsion. Two ounces more of mercury were given in a few hours. Not long after this the pain abated a little, and the vomiting became less incessant; but at the same time the pulse rose, the countenance became florid, and the abdomen so tender, that friction and fomentations could not be endured. Eight ounces of blood were therefore drawn, which checked the febrile state, but caused great weakness. Neither on this nor on the former occasions was the blood buffy. Clysters now administered brought away a little fecal matter, and a gurgling was heard in the intestines; but cathartics did not cause any discharge from the bowels. At night no amendment was visible. Dr. Ebers ordered three ounces more of quicksilver, and then other remedies to be continued, but with hardly any hope of her recovery. At two in the morning of the 24th, however, she fell asleep, and remained quiet for two hours, when at length copious feculent stools were discharged, with amazing relief to all her sufferings. The vomiting ceased, the pain became inconsiderable, the pulse fell to the natural standard, a gentle perspiration broke out, and she was able to quench her urgent thirst with the utmost gratification. Fæces were discharged throughout the subsequent day in large quantity. The first stools unfortunately were thrown away; but no quicksilver could be seen in the others. On the 25th the belly was doughy and excessively tender, and the stools scanty. Although she was extremely exhausted, the purgatives were repeated, as well as the clysters, by which great quantities of feculent matter were discharged, yet without lessening the size of the abdomen, or the turgidity of the whole colon. A tendency to vomiting had recurred. Opium and calomel, with croton oil, were then given, after which she became easier, and discharged more fæces. On the 26th the abdomen was soft, and not painful. On the 27th she continued to improve, and still discharged enormous quantities of fæces, amid which a few globules of quicksilver were for the first time observed. From this time forward the stools became loose, though copious; afterwards a diarrhœa set in. Tonics were therefore ordered, including wine. In the middle of October, with the exception of some remaining weakness, her health was quite reestablished. On the 1st November, an ounce and a half of mercury were discovered in the stools, and about as much more was discharged in the four following days. Although the mercury had thus remained five weeks and a half in the body, no inconvenience was produced by it, and in particular no salivation.

Case 2. In the summer of 1812, a woman was brought, in the afternoon, into the hospital of Breslau, on account of an obstinate constipation. She had been several days ill with this complaint, combined with dreadful pain in the belly, and incessant vomiting; and on the day of her admission into the hospital, she vomited a large quantity of feculent matter. Her countenance was sunk, the skin and extremities cold, the pulse small and quick, her strength excessively exhausted. The belly was everywhere extremely ten-

der and doughy; and Dr. Ebers imagined he felt large masses of fæces through the parietes. Her sufferings were so acute that she cried continually aloud, and could be persuaded to be silent for a few seconds only. A warm bath was tried, but was of no use; clysters were not retained; and every sort of medicine was rejected from the stomach immediately after being swallowed. A little opium was administered, but to no purpose. As the case appeared hopeless, Dr. Ebers resolved to have recourse to mercury, although he admits that he could not elicit any indication of probable advantage from it. Four ounces were given without anything else; and the patient swallowed it very unwillingly. In a few minutes she became a little quieter. In an hour two ounces more of the quicksilver were given, after which she fell asleep. She had scarcely been half an hour in this state when she discharged so enormous a quantity of fetid fæces, that it was necessary to remove her at once to another bed, while many of the patients vomited from disgust, and the physician himself was unable to remain a few minutes beside her. Several other evacuations speedily followed, in all of which mercury was found, though not so much as she swallowed. The patient recovered with great rapidity; she could hardly be persuaded to take a few doses of laxatives; and in eight days she was dismissed.

The rest of Dr. Ebers' paper contains much interesting historical and pathological information on the subject of ileus, and the correlative diseases of the bowels. But this part of it we must reluctantly pass over without notice. He has entered at great length into the various explanations that have been proposed to account for the operation of quicksilver in ileus, and ends with confessing that none are satisfactory. He admits that in very many forms of the disease this remedy is useless, and conceives that it is likely to prove advantageous only in the spasmodic species, and in that which depends on fecal obstruction. In these varieties he supposes the remedy acts by percolating the contents of the canal till it accumulates at the obstruction, and then by its weight and distending power presses the parietes, and interrupts the retrograde spasmodic action of the intestinal muscles. On account of the uncertainty of the diagnosis as to the cause of ileus, he allows that the physician must act in the dark, and therefore thinks quicksilver ought not to be resorted to, except as a last resource; but at the same time he insists that it never does any harm. When it is to do good, its beneficial effects begin in a few hours, or even less than an hour. On examining the results of prior authors who notice this mode of treatment, he finds that those who commend it used large quantities, while those who consider it of little advantage commonly gave it in small doses.—*Edinburgh Medical and Surgical Journal.*

CHEMISTRY.

Account of an Apparatus for ascertaining the value of different Alkalis.—The apparatus consists of a glass jar about one inch in diameter, containing about five cubic inches, and graduated into inches and tenths; a dropping tube about seven or eight inches long, divided into thirty equal parts; a porcelain mortar and pestle; a weight of 100 grains, and a bottle of sulphuric acid, so diluted that the quantity contained in twenty-two divisions of the dropping tube will just saturate fifty grains of crystallized subcarbonate of soda. To determine the point of saturation, litmus paper may be used, or, what is much more convenient, infusion of cabbage.

Method of use. The sample to be examined having been pounded sufficiently to pass through a coarse sieve, rub up some of it in the porcelain mortar until it be reduced to a very fine powder; from this weigh 100 grains and return it into the mortar; add thereto boiling water, a small quantity at a time, and continue to rub it as long as any grittiness appears under the pestle; suffer it to stand a short time, and pour off the liquid into a pint or half pint vessel with a lip; add more boiling water to what remains, and again use the pestle, repeating this to ensure the perfect solution of all the soluble part of the sample, until about half a pint of boiling water has been employed; transfer the whole into the same vessel, stir it well together, and allow it to stand for the insoluble part to subside; when this is effected, measure off the clear liquor by pouring it into the graduated jar, and set it by for use; measure also the remainder, first shaking it up, and having noted the total quantity, this remainder may be thrown away. Take of the clear solution just one half of the whole amount of the two quantities, and add thereto about a tablespoonful of the infusion of cabbage; then, having filled the dropping tube to the upper division with the test acid, drop so much into the sample, constantly stirring the mixture, as will just change its green color to crimson; the quantity of acid used, as indicated by the divisions on the tube, will show the percentage of alkali in the sample, if it be barilla, kelp, or manufactured soda; but, if the sample be pot or pearl ashes, augment the proportion of test acid used, by adding to the number of divisions indicated by the dropping tube, one half such number, and the total will be the percentage of alkali in such sample.

Should it be desired to ascertain the quantity of carbonic acid contained in the sample, we need only note the point at which the solution becomes blue in the foregoing process, and deduct the divisions then indicated by the test tube from the subsequent total amount; every ten of the remainder will then indicate seven per cent. of carbonic acid, whether of barilla or of potash.—*Quarterly Journal of Science.*

Electricity of the Solar Rays. (Letter from Sig. Carlo Matrucci of Forli, to Professor Gazzeri.)—"I hasten, sir, to commu-

nicate to you some experiments which appear to me to deserve the attention of philosophers. Having been for a long time persuaded of the existence of electricity in the solar rays, I wished to ascertain the fact by experiment. Having, for this purpose, exposed to the sun a delicate condensing electrometer of gold leaf, I soon perceived the leaves diverge and open themselves also on that side of the glass case which was directly exposed to the solar action, as if they had been attracted by it. Being induced from this first fact to suspect glass in this situation electrified, I was anxious to know if this were the case: wherefore, having left some plates of it in the sun, in a few moments I touched them in different places with the ball of the electrometer, when a very perceptible divergence ensued, which, however, was much more apparent when I touched the plates, although lightly, with a flat surface, since the effects of the friction and the pressure did not afford a doubtful result. I concluded, then, that the solar rays had the power of electrifying glass, and it only remained for me to ascertain if this effect were owing to the real existence of electricity in these rays, or rather to the increased temperature of the glass, which I could easily determine by heating a plate of glass, and trying it with the electrometer. This I did several times, but never discovered any signs of electricity. I observed, also, that the glass plate exposed to the rays of the sun, never became electric if placed beneath another glass plate, or if the face of the sun was obscured by the intervention of a cloud. These few experiments, which I have been induced to perform, seem to me sufficient to prove electricity in the solar rays. The influence of such a fact on the meteorological phenomena of terrestrial magnetism, and on so many other phenomena of nature, will, I hope, induce yourself and other philosophers to pursue the subject farther."

—*Antologia*, No. 109.

Forli, April 25, 1829.

Professor Saverio Barlocchi, of Rome, in a Memoir on the Influence of Solar Light, in the Production of Electric and Magnetic Phenomena, inserted in vol. xli. of the *Giornale Arcadico*, relates the following experiment he had performed, to ascertain the electric power of the solar light. Having decomposed it with a prism, he made the red ray and the violet ray fall upon two discs of blackened copper, each of which was attached to a copper wire. Two nuts of the same metal, sliding upon a vertical glass rod, and to which the two wires were attached, permitted their being brought near together, or removed at pleasure. Having suspended a prepared frog by the body to the upper wire, the legs were placed upon the lower one. The apparatus being thus arranged, whenever (the discs being respectively covered with the red and violet rays) a contact was formed between the extreme parts of the two wires, evident signs of contraction were observed in the frog.—*Note by Prof. Gozzetti*.

Having experimented, two summers since, upon the solar spectrum, in exactly the same way, except that a very delicate galvanometer was used instead of a frog, no electricity could be obtained by means of an English sun.—M. F.—*Quarterly Journal of Science, Literature, and Art*.

On the Formation of Acids in Vegetables. By M. VAUQUELIN.—I have thought that, in a great number of cases, the development of acids in vegetables was principally occasioned by the presence of alkalis. We find, in fact, the acids almost always neutralized altogether, or in part, by various alkalis, as lime, potash, soda, magnesia, and sometimes by vegeto-alkalis; and I do not know that the latter have ever been found in a free state in the vegetable kingdom.

The alkali which plays the greatest part in this respect is certainly lime, for it is most generally diffused, is most abundant at the surface of the earth, and powerfully attracts acids. It does not, certainly, enter into the organic kingdom in the state of lime, but as carbonate, which, without exerting any deleterious action on vegetables, still retains sufficient alkaline force to determine the formation of acids, and particularly the oxalic, which it prefers to all others.

We may thus, as I have said elsewhere, explain the effect of calcareous manures on vegetables. Immediately after its introduction into the organs of plants, the carbonate of lime determines the development of an acid which decomposes it, and sets its carbonic acid at liberty, which, by means of light, is turned to account in the vegetable kingdom. From hence, it may be concluded that calcareous manures fill two important functions; namely, the division of the soil, and the nutrition of the plants.—*Ann. de Chimie*, xli. 59.

Rosacic Acid in Human Urine.—M. Henry has observed in certain cases of acute rheumatism, accompanied by nervous fever, that the urine has been of a very red color, and produced an abundant deposit on cooling. On analyzing the secretion in such cases, he found that it was very acid, that phosphoric acid and phosphate of lime were very abundant, and that the uric acid had almost entirely disappeared and been replaced by rosacic acid in large quantities.—*Jour. de Phar.* xv. 228.

MEDICAL JURISPRUDENCE.

Poisoning with the Salts of Morphia.—M. Julia Fontenelle relates two instances of poisoning with the preparations of morphia. One of these, which proved fatal, originated in a mistake committed by a physician, who prescribed ten grains of *sulphate of morphia* in the way of injection for a child five years old. The apothecary to whom the prescription was sent represented to the grandmother of the child that the dose was too large; but she had so much confidence in her physician, that in reply she requested the injection might be made according to the terms of the prescription. Soon after the injection was given, the child fell into an apoplectic state, and, notwithstanding all the resources of art—expired in eleven hours. The second case is a much more remarkable one, as the particulars have been recorded in detail. A Brazilian student of

medicine, urged by domestic distress to put an end to himself, purchased twenty-four grains of acetate of morphia at six in the morning, and swallowed twenty grains of it dissolved in an ounce of distilled water. In six or seven minutes the symptoms of poisoning commenced with loss of consciousness. He remained alone till four o'clock; at which time the master of the lodging house being surprised at his nonappearance, directed the door to be opened, and found him stretched on his bed, and in dreadful convulsions. Professor Orfila and several other physicians were soon summoned to his assistance. They found him affected with violent trismus, so that not a drop of liquid could be introduced into his mouth, the pupils slightly dilated, the whole body chilly, the pulse 120, the breathing impeded and stertorous, the skin itchy. As it was impossible to administer emetics, venesection was performed to a large amount, (seven *pallettes*,) after which the body became warmer. Sinapisms were then applied to the feet, and injections of tartar emetic administered. The patient in consequence became able to swallow vinegar and water, and infusion of coffee. At ten at night he recognized M. Orfila. The frequency of the pulse, as well as the other symptoms of poisoning, had abated very much. In four days convalescence was completely established. Orfila stated that he had never seen so violent a case of poisoning with opium or any of its preparations.—*Revue Médicale, Septembre, 1829.*

Poisoning with Acetate of Copper.—A lace worker, twenty-six years old, of a very melancholic tendency, and who had attempted to destroy himself with the water hemlock five years before, put eight *sous* pieces into a glass of strong vinegar, and left them there for seven days. At two o'clock of the afternoon, having made a good dinner, he drank first one half, and then in fifteen minutes the remainder of his potion. Not content with this, he washed the coins in more vinegar, brandy, and anisseed water, all of which he also swallowed. Three hours afterwards he was found insensible. The muscles were violently convulsed; the limbs in the intervals of the convulsions were stiff, the teeth set, the breathing interrupted, the pulse small, hard, and very slow, the pit of the stomach tender on pressure. With difficulty he was made to drink some glasses of hot water, which, however, did not make him vomit. In half an hour he recovered his senses, and told what he had taken. The white of eggs was immediately given in large quantity. The convulsions afterwards ceased rapidly, but he continued to hiccup till two in the morning. Next morning the pulse was full, slow, and intermitting; the belly drawn in, hard, and very painful on pressure; the skin pale; the convulsions partial and transient. Leeches were directed to be applied to the abdomen, and afterwards poultices; at the same time the white of eggs were persevered in; and the warm bath, with mild opiate injections, was used. In the evening he had colic, dyspnoea, great agitation, hiccup, and a hard contracted pulse. The leeches were repeated. The urine at this time was scanty and scorching. He passed an indifferent night; but next morning was easier. The abdomen was not tender, the pulse was

soft, and the urine was natural in quantity. In fourteen days after his admission he was dismissed cured.—*Revue Médicale, Septembre, 1829.*

Professor Orfila on the Detection, Morbid Appearances, and Treatment of Poisoning with Hydrocyanic Acid.—If the hydrocyanic acid is in a state of pure solution in water, the most delicate tests for it, according to the late researches of Orfila, are nitrate of silver and the smell. Its peculiar smell is perceptible when no chemical reagent is delicate enough to detect it. The nitrate of silver causes in very diluted solutions a white precipitate, the cyanide of silver, which is insoluble in nitric acid at the temperature of the air, but easily soluble at the temperature of ebullition of the acid, very soluble in ammonia, not easily blackened by light, and yielding, when heated under exposure to the air, metallic silver, and cyanogen gas. As the latter is easily recognized by prominent properties, Orfila thinks that the nitrate of silver is a very characteristic test of the presence of hydrocyanic acid. The sulphate of iron, which is usually employed, he finds to be less delicate. This is used by adding an alkali to the liquor supposed to contain the poison, and then dropping in the sulphate; a greenish brown precipitate is formed, which becomes Prussian blue on the addition of a little sulphuric acid. It is very strange, that the professor continues to repeat the error into which Lassaigne and other French chemists have fallen, and which was pointed out some time ago by Dr. Turner,—that the proper sulphate for this purpose is the persulphate. The correct test is the protosulphate or common green vitriol; the true persulphate having no action at all except with the alkali added to the suspected solution. We entertain great doubts of the accuracy of his statement as to the delicacy of the test of the smell, provided the acid be pure and not mixed with etherial oil; as in the oil of almonds or cherry laurel water.

If the hydrocyanic acid is mixed with a colored solution of such a tint that the nitrate of silver and sulphate of iron cannot act characteristically, it will sometimes suffice to hold for a few minutes in the fluid a bit of paper impregnated with pure potass, and then to touch it with a solution of sulphate of iron, when the blue color will be struck on the paper. On other occasions the fluid may be sufficiently decolorized with animal charcoal used without heat. When neither of these modes will answer, the liquid must be gently distilled, and the tests applied to the distilled fluid.

If the medical jurist is required to determine the quantity of hydrocyanic in a solution, which, on account of its very variable strength, may often be necessary in judicial proceedings, the best method, according to Orfila, provided the solution is pure, or contains only syrup or such other articles as do not precipitate with nitrate of silver, is to add that reagent in excess, and to dry the precipitate. Of this precipitate, which is the cyanide of silver, 100 parts when properly dried are equivalent to 20.33 of pure hydrocyanic acid.

On the subject of the morbid appearances caused by hydrocyanic
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acid, the only new information of material value in the present paper is an account of the inspection of the bodies of seven persons who were killed by this poison accidentally in one of the Parisian hospitals. The quantity swallowed by each was twenty grams of Vauquelin's acid. The posterior part of the body was livid; the head, face, and lips were violet and a little bloated; frothy blood of the usual color issued from the nose and mouth; the eyes were closed; and the whole body was (twenty-four hours after death) rigid as usual. In the subperitonæal cellular tissue of the stomach and small intestines there was much vascular injection, which near the ileo-cæcal valve gave the gut a black color. The contents of the stomach did not exhale the odor of hydrocyanic acid. Its inner membrane presented red patches on the prominences of the rugæ and a granulated appearance, as if from enlargement of the mucous crypts. The inner membrane of the small intestines was in a similar state; and at the point corresponding with the external blackness already mentioned there was blood effused between the mucous and muscular coats. The liver, spleen, and kidneys were healthy, and unusually gorged with black blood. The heart was also healthy, and did not contain any blood; and the great arteries were also empty, but the great veins gorged with black fluid blood. The lungs were slightly gorged behind with blood; the windpipe and its ramifications of a deep red color, and the latter filled with a bloody froth. The scalp when cut into discharged a moderate quantity of fluid blood; the sinuses of the dura mater were full of it; and the vessels in the substance of the brain were in a similar state; but nowhere could any effusion or local redness be seen. The brain was soft. The spinal cord was in the same state with the brain. In no part of the body was there to be perceived any odor of hydrocyanic acid. Putridity had not commenced. The patients lived from thirty to forty minutes after taking the poison; its effects began in about ten minutes; and the symptoms were in all at first convulsions and then coma.

Of the reputed antidotes for hydrocyanic acid, Orfila has found, that liquid ammonia introduced into the stomach, oil of turpentine, and infusion of coffee are of no use whatever. But diluted ammonia when inhaled will sometimes preserve from death, when the dose has not been sufficiently large to act with rapidity. A dog weighing eight pounds, which had taken eight drops of the medicinal acid in twelve drops of water, and which would have been killed by that dose in twelve or fifteen minutes if left without assistance, was saved by the inhalation of ammoniacal water. Another dog, of the weight of thirty pounds, swallowed fourteen drops in two doses, and was seized violently with the usual symptoms. Nevertheless, by means of the ammoniacal solution, which it was made to inhale by sprinkling it on the muzzle, it recovered in the course of sixty-five minutes. In using ammonia for the purpose, care must be taken to employ it sufficiently diluted; for strong ammonia will inflame the mouth, air passages, and even also the mucous membrane of the alimentary canal. The pure *aqua ammoniæ* should be diluted with twelve parts of water. Professor Orfila has

omitted to mention, that the effect of the inhalation of ammonia as an antidote for this variety of poisoning was pointed out for the first time, and several years ago, by Mr. John Murray of London.

Very lately M. Siméon, apothecary to the hospital of St. Louis at Paris, was led to suppose, from some experiments on animals, that the vapor of chlorine might prove a useful antidote. M. Orfila confirms that idea. He has found that the inspiration of water impregnated with a fourth of its volume of chlorine gas is a more certain and effectual antidote than ammonia, and that animals which have taken a dose large enough to cause death in fifteen or eighteen minutes, will be saved by it, although its administration be delayed till four or five minutes after the swallowing of the poison. A dog of the weight of twenty pounds took six drops of the medicinal acid diluted with eight of water, and in one minute was under the action of the poison, being affected with violent convulsions, spasmodic rigidity, and opisthotonos. In one minute more the chlorine water was administered by inhalation, five minutes after which the flaccidity and insensibility, which followed the earlier symptoms, had almost entirely disappeared. In ten minutes more the animal was quite well. Another larger dog, after taking repeated small doses of the poison without being affected, swallowed nine drops diluted with twelve of water. In twenty seconds it was violently attacked with giddiness, panting, and opisthotonos, and it was to all appearance about to perish. It was then made to breathe chlorine water, which was also sprinkled on its nose; and in ten minutes it so far recovered as to be manifestly out of danger. In three quarters of an hour it was quite well.

Professor Orfila has likewise tried the cold affusion recommended by Dr. Herbst, as was announced in the last number of this Journal; and he confirms the results obtained by that gentleman, but thinks that it is inferior in efficacy to the inhalation of chlorine. The treatment of a case of poisoning with the hydrocyanic acid should consist, according to the preceding researches, on the one hand, in the inhalation of chlorine if it can be procured, or, failing that, the inhalation of ammonia properly diluted, and on the other hand, in the employment of occasional cold affusions. It is hardly necessary to add, that the ammonia will commonly be preferred to the chlorine, as the latter will very rarely be at hand. Venesection is also indicated by the signs of venous congestion.—*Annales d'Hygiène Publique et de Médecine Légale, Juillct, 1829.*

On the Effects of Tobacco on the health of the Workmen who manufacture it.—It has long been a matter of deep regret to the statistical enquirer, the political philosopher, and the physician, that so little definite information is possessed on the healthiness and unhealthiness of the different trades; and it has been the subject of great surprize that advantage has not hitherto been taken of the ample means of investigation in the manufacturing parts of the British empire to supply this important defect. Every one must peruse with astonishment even the most modern works on the diseases of

artizans, where he is led to infer that there is hardly a trade in civilized life, which is not calculated to induce many peculiar maladies, and materially to shorten the term of existence, while nevertheless, when he takes a general view of the state of the population engaged in trade, he is unable, except in a very few instances, to detect any satisfactory evidence in support of such belief. Now that medico-statistical enquiries begin to attract in this country the deep attention which they merit, we may hope to see these inconsistencies and our defective knowledge removed. Meanwhile the subject has been taken up, apparently with zeal and activity, in another land, where we are compelled in justice to say that in almost all the departments of medicine, essential and collateral, there at present prevails a spirit of enterprize and an assiduity of investigation, which is far from being so generally diffused at home. In Paris a particular department exists under the name of the *Conseil Général de Salubrité*, which is composed of several of the chief members of the state, and many of the eminent physicians, surgeons, chemists, and engineers, and which has a general charge of all matters relative to the public health. The Journal from which the following observations are quoted, which is of very recent origin, and one of the most valuable periodicals at present published in Europe, contains several most interesting narratives of the labors of this body in various departments. Among other topics the General Council has begun to investigate the healthiness of the trades where great numbers of individuals are collected together; and the first produce of their exertions is a long and admirably written paper by *MM. Parent-Duchatelet and D'Arcet*, two of the members, *On the Real Influence which Tobacco has on the health of the Workmen who manufacture it into its various commercial forms.*

As in regard to many other trades, so with respect to that of tobacco manufacturer, strong prejudices have been long entertained against it on account of its supposed unhealthiness. The authors quote various prior writers, from Romazzini down to Patisier, who all support the vulgar opinion. But their statements are vague in the highest degree, their facts scanty and imperfect to a lamentable extent, and their whole enquiries as rich specimens as can well be imagined of hasty induction and meagre thought. Among the authors quoted, we find the names of Fourcroy, Cadet-Gassicourt, Tourtel, Percy, and Mérat.

MM. Parent-Duchatelet and D'Arcet set out in the narrative of their enquiries by specifying the several processes to which the tobacco is subjected in the course of manufacture. 1. The first process is the shaking out the bales, during which much tobacco dust is raised. 2. The next is the damping of the leaves. 3. The next is the removal of the footstalks and greater nerves of the leaves, which is done with a knife or razor. 4. They are next gathered in heaps from thirteen to nineteen feet square and high, which are moistened with weak brine and other articles to communicate fragrance and then allowed to undergo slight fermentation. At this stage of the process a different procedure is observed for the manufacture of snuff, and for that of tobacco for chewing and smoking.

5. The large leaves are picked out for cigars and chew twists, while the remainder is cut into fragments for pipe smoking. The tobacco for these purposes is dried by smoke on iron tables. 6. For making snuff the heaps are coarsely chopped down with knives and hatchets, next put into the hands of the raspers and grinders, and then passed through the sieve. 7. Additional qualities are communicated to the powder in large wooden boxes, by various manipulations. In the first of these processes the workmen are constantly exposed to tobacco dust; in the second, they work in low damp apartments; in the third, they sit on and are surrounded by great heaps of tobacco; in the fourth, great corporeal force is required to frorn the heaps; in the sixth, the workmen are often wounded by their cutting instruments, and are exposed to an atmosphere of hot, acrid vapors, disengaged by the breaking up of the fermenting heaps. The powdering of the tobacco for snuff, when not accomplished by mechanical means, requires violent exertion, so as to cause continued sweating. The sifters, and those who carry the sifted powder to the boxes, are exposed to strong acrid vapors, which no unpracticed person can endure. Those who superintend the drying of the tobacco for smoking, are exposed to a great heat, and the most pungent vapors disengaged in the whole manufactory.

In order to ascertain the effects of these operations on the workmen,—operations which it is natural to suppose *á priori* would be injurious, the authors applied for authentic returns from all the great snuff manufactories in France. These are ten in number, and are situated in Paris, Toulouse, Lyons, Strasburg, Marseilles, Tonneins, Bordeaux, Morlaix, Lille, and Havre. The workmen employed are 4518; so that the field of observation was sufficiently extensive. The first point relative to their health which engages the attention of MM. Parent-Duchatelet, and D'Arcet is the answers given by the managers and physicians of these establishments to the question, *whether the workmen experience any change in their state of health when they commence the trade of tobacco manufacturer and have not been habituated to its emanations?* At Paris, where the authors had an opportunity of personally questioning the workmen, it appears that a very few are incommoded,—that some of the workmen who cut down the tobacco heaps and dry it have been attacked with vomiting, stomach complaints, and diarrhœa—that they almost invariably get rid of these inconveniences in a few days—and that it is extremely rare for a workman to be compelled to abandon the trade. In most of the manufactories no such instance had occurred in a long series of years; in others, one or two only. Even children are not affected. The next question which is examined in the present paper is, *whether the health of the workmen is injured by their trade?* To this question the invariable answer from every establishment is, that the workmen are not subject to any disease to which workmen generally are not subject, and that they are not more subject than others to certain diseases, or to disease generally. They have, for the most part, a healthy look, and if they are seldom corpulent, this arises not from any attenuating property in tobacco emanations, but from the hard work to which

they are subjected. These practical results are strangely at variance with the theoretical statements which have hitherto been received as true—that the workmen are subject to colic, rheumatism, hemorrhagies, nausea, giddiness, muscular tremors, chest affections, and asthma at an early age. From an account kept at Paris of the state of sickness of the work people, it follows that the average number of days when each was off work on account of sickness, was only $11\frac{3}{8}$; and in five years, out of a population of 1050, the annual mortality has only been 2.6, or one in 404. The third question is, *what effect has the tobacco on the functions of the nervous function?* It has been supposed by many that the narcotic properties of tobacco ought to exhibit themselves in the form of stupor and somnolency among the workmen. But on the contrary, it is expressly stated that they are often found sleeping on the tobacco heaps, and that neither asphyxia nor sopor were ever observed to arise from the practice. At some of the establishments the manager and his assistants as well as the physician have made the experiment with the same result. The next question relates to *the causes of the invaliding of workmen from the manufactories.* These are old age, insufficient strength, palsy, epilepsy, scrofula, dartous eruptions, maims; but very few have been dismissed for any of these causes except old age; and at Paris very few claims to retire on the superannuated fund have been made before the age of sixty. To the next question, *whether the trade impairs longevity?* it is replied, that many old men are on the manufactory lists, very many above seventy, and that a great number of these have been 30, 35, and 40 years in the trade. At Havre, in a population of 348, there are 107 above fifty years of age. At Paris, in a population of 1050, there are 152 above sixty, 101 above sixty-five, 44 above seventy; and of the 152 only 36 had worked for less than fourteen years in the manufactory. The last question is, *whether, in respect of the public health, tobacco manufactories ought to be tolerated in great towns?* To this question it is answered, that on one condition they are perfectly harmless; and the condition is, that the refuse of the tobacco bales be burnt at a distance from the town. This operation appears to be one of the greatest nuisances which can exist in the neighborhood of any human habitation. It is stated in the present paper, that the acrid vapor disengaged by the furnaces for consuming the refuse of the Paris manufactory, renders it intolerable to reside even within a mile of the place where this operation is conducted. This fact will surprize no one when it is mentioned that the matter burnt usually amounts each time to 500,000 pounds, and that the burning continues eight days and upwards. The burning is performed in the Plain of Grenelle; and repeated and well founded complaints have been lodged with the authorities by the surrounding villages. But around the manufactories themselves no complaints of nuisance have ever been made, when this operation was not conducted in them.—*Annales d'Hygiène Publique, et de Médecine Légale, Avril, 1829.*

On the Detection of small quantities of Mercury.—Mr. Smithson, some time since, described a very sensible test of the presence of mercury in solution, consisting in the immersion of a gold ring or plate into the solution, a piece of tin foil having been previously rolled round it, and a few drops of muriatic acid being added to the liquid. This small voltaic pile caused a deposition of any mercury present upon the gold, which became white in consequence. If, on applying heat to the ring or plate, the gold resumed its yellow appearance, the proof was considered perfect. M. Orfila, in applying this test, found some preparations gave all these appearances, and yet contained no mercury; and led by this to make various trials, he found that the tin foil might be dissolved by the acid, and then precipitated on the gold, giving the white appearance, which disappeared on the action of heat. He found that the gold and tin, if put separately into a mercurial solution, would not indicate the mercury by a white appearance on the gold. He found also that gold, whitened by the deposition of tin and of mercury, might be distinguished by pure strong muriatic acid, which dissolved the tin but not the mercury, and therefore restored the yellow color of the gold in the former, but not in the latter case; but he thinks, that, though, with this precaution and additional trial, the presence of mercury may be almost certainly ascertained in solution, yet still that the proof is not complete except the gold plate is put into a glass tube, and the mercury driven off by heat, and being condensed above, is recognized as mercury in the metallic state. With these precautions, he admits that the use of Mr. Smithson's small voltaic pile affords the most delicate test known for small portions of mercury in solution.—*Ann. de Chimie*, xl. 92.

Adulteration of Bread by Sulphate of Copper.—The journals of Holland have, for some time, announced that sulphate of copper, or blue vitriol, was employed in that country to assist in the fermentation of bread; and, at the same time that they pointed out the dangerous nature of this substance, they said that it was used because it was supposed to render the bread whiter, more compact, more healthy, and better fermented. The magistrates of Bruxelles caused thirteen bakers and five druggists to be brought before them for being concerned in this adulteration; and it appeared, 1, that the employment of the process came from France, and that by the use of *blue alum*, a better fermented and whiter bread was obtained than by ordinary processes; 2, that the use of the process was announced in the public journals, and in a prospectus signed Frinch, which, being printed, was distributed, and stated that a patent secret for the preparation of leaven was to be sold, but without describing in what it consisted; 3, that the bakers enquired for the substance under the term *blue alum*, and that the druggists gave, under this name, blue vitriol, or the sulphate of copper.

The magistrates decided that the druggists did not know the use to which the poisonous substance which they sold was to be put, although the frequency of demand, and the character of the buyers, ought to have raised their suspicion; they were therefore dis-

charged, but they condemned the bakers (although they said they thought the substance innocuous) to five day's imprisonment, and a fine of fifteen florins.—*Jour. de Chimie Medicale.*

It is painful to observe the substance which forms our daily food thus adulterated and rendered poisonous, first by one article, and then by another, to satisfy the avarice of a set of tradesmen. No argument which they may advance, drawn from the competition in trade, or supposed innocence of the substance used, will avail them. They well know they are doing wrong, as is shown by the secrecy in which they invest their proceedings; and besides their liability to be punished when their knavery is discovered, they must be branded with the character of a heartless set of people, who do not hesitate for a moment to trifle dishonestly with the health of their fellow creatures, when it serves their own pecuniary interest. It is also a sad thing that the practices of the bad should, by the just suspicions which they create in the minds of all persons, throw a shade over that portion of their fellow tradesmen who are willing to act honorably, which scarcely anything can remove.—*Quarterly Journal of Science, Literature, and Art.*

Decomposition of Corrosive Sublimate by Vegetable Bodies.—According to the experiments of M. Fabian, the mucilage of quince seed (*cemence de coing*) and that of salop, decomposes corrosive sublimate the instant it is mixed with its solution; but the decoction of marshmallow does not produce the same effect, and the extract of liquorice only partially.—*Ibid.*

On the Adulteration of Milk at Paris.—The subject of the adulteration of milk has been lately investigated with great care by M. Barruel of Paris. Although his observations are intended to apply only to the milk of that city, yet there is little doubt that they will also be found applicable in a greater or less degree in all great towns.

He sets out with stating that all instruments for ascertaining the purity of milk, which are calculated to attain this end by pointing out differences in its density or specific gravity, are inaccurate and useless. For, on the one hand, pure milk differs much in density according to the fodder used by the dairy man for his cows, the butyraceous matter, which imparts lowness of density, being made to preponderate by some sorts of food, and the caseous part, which increases the density, being made preponderant by other sorts. And, on the other hand, although water, the ordinary substance with which milk is adulterated by the dealers in the French capital, would alone cause a great diminution of density, the dealers know very well how to prevent that effect, and so render the areometer useless. For this purpose, it is only necessary to dissolve in the milk a little sugarcandy, which is required at all events in order to correct the flat taste imparted to milk by diluting it with water.

The result of M. Barruel's enquiries on the adulteration of milk in Paris is, that no positively noxious substance is ever to be found in it, that a common practice is to remove a considerable portion of

the cream by allowing the milk to stand for a limited time, and then to dilute the remainder, or skimmed milk, with water, and to give it the apparent qualities of new milk in one or other of the manners now to be mentioned. The opacity of the milk being much diminished by the water, so that the milk acquired a bluish appearance, it was at one time usual to correct this defect by previously mixing wheat flour with the water with which the milk was diluted. But this adulteration was too obvious to the senses. Any person even of indifferent delicacy of palate could detect the altered taste of the milk; and besides, after two hours rest the flour sank to the bottom, restoring the translucent blueness of the milk, and pointing out the nature of the fraud. To prevent this inconvenience, the dealers boiled the flour in the water before mixing it with the milk; and in this way an opaque mixture was procured, which retained its opacity on standing. As even with this addition the fabricated liquid had a flat taste, sugar or sugarcandy was dissolved in it, by which means the peculiar sweetness of the milk was partly restored. This adulteration, however, has become so easy of detection by means of iodine, which renders the mixture blue by its action on the fecula of the flour, that M. Barruel believes the fraud now described is very little practised in the present day at Paris. In Britain, where the municipalities take no charge whatever of the purity of this most important article of food, it may be presumed that the adulteration with flour, sugar, and water, is common enough, as it is a simple and cheap mode of accomplishing every purpose of the fraudulent dealer. The best mode of proving the presence of farinaceous matter in such mixtures, is to beat the milk with a little sulphuric acid, to coagulate the casein, to filter the whey, and then to add to the latter the tincture of iodine; upon which a fine blue color will be struck.

Driven from this species of adulteration, the Parisian dealers have latterly resorted to another so ingenious, that M. Barruel conceives they could not have discovered it without the aid of some scientific person. The method is simple, so cheap, that for ten pence the opacity and color of milk may be imparted to thirty English pints of water, and so far secret that no disagreeable taste is communicated. This is nothing more than the employment of an emulsion of almonds, for which some dealers, more greedy and less cautious than the rest, have substituted hemp seed, which, however, is apt to impart an acrid taste. By either of these means, the milk may be diluted to an indefinite extent; and the only corrective required is a little sugarcandy to remove the flat taste. A peculiar advantage possessed by this mode of adulteration over every other, is, that the vegeto-animal matter, or vegetable albumen of the emulsion by which the oil of the almond is held in suspension, is coagulated, or curdled, like casein by acids. The method recommended by M. Barruel for detecting the fraud is founded on two circumstances: the greatly inferior quantity of coagulum formed by acids in the mixture of milk and almond emulsion, compared with that formed in milk alone; and the facility with which, by kneading the coagulum with the fingers, oil may be squeezed out of the former, while none exists in the latter.

On examining carefully four different specimens of pure milk, procured from different parts of Paris, he found that 300 parts of each, coagulated by heating them with an equal volume of vinegar, gave each an equal quantity of curd, which, when well drained and equally pressed between folds of bibulous paper, weighed 29 parts; and that the same quantity of milk taken from a cow in presence of a person sent to procure it, gave 30 parts of curd. He then found that when the same milk was mixed with various proportions of water, the quantity of curd was exactly in the inverse ratio of the proportion of water added. The water, therefore, did not prevent any portion of the curd from being thrown down by the usual modes of curdling the milk. He next found, that, if a given quantity of sugar was added to the mixture of milk and water, the quantity added could be separated exactly by evaporating the whey to the consistence of an extract, treating this with alcohol, filtering the alcoholic solution, and evaporating to dryness. He then also found that, when equal parts of the almond emulsion and milk were mixed together, 300 parts of the mixture curdled by vinegar as above, gave $16\frac{1}{2}$ parts of curd; and that the same quantity of a mixture containing two parts of emulsion to one of milk, gave only 10 4-5 parts of curd. So that although, as was to be expected, the adulteration with almond emulsion did not lessen the quantity of curd to the same extent as adulteration with water only, yet the decrease was very great, and very nearly in the ratio of the proportion of emulsion added. Lastly, on placing pure curd on white paper, no oily matter was thrown out; but the curd procured from the mixture of milk and almond emulsion, besides being less firm than the former, gave out in 24 or 48 hours a quantity of oil sufficient to stain the paper.

Another adulteration to which milk is subjected in Paris is with carbonate of potass or soda. The object of this variety of adulteration is in the hot summer months to prevent the milk from becoming sour and curdling, or to break down the curd and correct acescency when the milk is actually become spoiled. In this process acetate of potass or soda is formed. Neither of these salts in moderate quantity is injurious to the health; indeed, acetate of potass exists naturally in milk, and is the source of some embarrassment in the detection of the present fraud. The mode of analysis adopted by M. Barruel is as follows. As the alkaline acetates are converted by incineration into carbonates, he endeavored, by means of this property, to ascertain the quantity of alkali naturally contained in whey. He therefore evaporated a certain quantity of whey to dryness, incinerated the residue in a platinum crucible, and procured an alkaline ley from the remainder, which, by the process recommended by Décroisil for measuring the strength of alkaline fluids, indicated from one and a half to two degrees of alkalinity. Hence any increase of alkaline strength above the last of these points must be considered as owing to the intentional addition of carbonate of potass or soda. This is evidently the most difficult of the processes recommended for detecting the various adulterations specified in M. Barruel's paper. Indeed a chemist alone could con-

duct it. The others may be easily executed by any body.—*Annales d'Hygiène Publique et de Médecine Légale. Juillet, 1829.*

Statistical Account of the Lunatic Asylum at Charenton for the years 1826-7-8.—M. Esquirol, who has been for some time chief physician to this establishment, has published a long report on the state of the patients treated there in the years 1826-7-8. The following is an abstract of the chief numerical statements. The Asylum at Charenton, (Maison Royale de Charenton,) was founded in 1641 by Sebastian Leblanc. At first a general hospital, it afterwards became an asylum; and in 1790 contained between 80 and 90 patients. At present its population fluctuates between 480 and 500. Many improvements have been made of late years in its various establishments, and more are projected; so that, considering also the beauty of the situation, it will soon become one of the most perfect asylums for the insane in Europe. The patients received into it are chiefly from the better ranks of life.

The admissions during the three years specified above have been 619, or 206 annually. The greatest number of admissions has been in the three hot months of June, July, and August, namely 31.5 per cent. of the admissions per year; next to these months are March, April, and May, when the admissions are 25 per cent.; next to these, December, January, and February, when 22.3 per cent. were admitted; and the lowest were September, October, and November, when only 21.2 per cent. were admitted. As to the ages, 3.56 per cent. were between fifteen and twenty; 10.83 between that and twenty-five; 13.9 between that and thirty; 15.84 between that and thirty-five; 13.09 between that and forty; 12.76 between that and forty-five; 11.63 between that and fifty; 8.4 between that and fifty-five; 3.4 between that and sixty; the same between that and sixty-five; 0.96 between that and seventy; and 2.23 per cent. above seventy. With regard to the sexes, it is a remarkable fact, that (contrary to what is observed throughout France generally, where the women preponderate in the immense disproportion of 14 to 11 males,) at Charenton the males preponderate over the females in the ratio of nearly 3 to 2. On the subject of the influence of sex, M. Esquirol compares the differences in different countries, (which the reader will remember was brought before the public by Dr. Burrows;) and he arrives at the singular conclusion, that the differences compensate one another, so that taking in one mass the insane population of France, Spain, Italy, Holland, Britain, the north of Germany, and the United States of America, out of 76,526 insane, 37,825 are males, and 38,701 are females, which is nearly in proportion to the relative number of the sexes in the population generally. A singular fact deduced from the lists at Charenton, is, that after the age of sixty-five few women become insane, compared with the number of men. Of fourteen patients admitted after that age, three only were females. All of these patients were maniacs or monomaniacs. Nearly half of the 619 were unmarried. Of 282 married persons, exactly one half were males, and one half females: But of 293 unmarried persons, there were

206 males and only 87 females. This extraordinary difference shows how much the excesses of a single life add to the list of the insane among the middle ranks. As to profession, it appears that a great number of the insane males belong to those trades in which the body is much exposed to heat, such as that of the baker, inn-keeper, and cook. Among the women those are most liable who lead a sedentary life, working in their own houses. A singular fact is, that among the military as many insane are supplied by the officers as by the privates. The greater number of the insane military throughout France are transmitted to Charenton; and during three years there were admitted 49 officers and 47 privates. The physical causes could be traced only in 256 cases, among which 93 were traced to hereditary tendency, 23 to masturbation, 24 to libertinage, 16 to the abuse of mercury, and 64 to drunkenness. The operation of moral causes could be traced in 192 only; and of these 89 arose from domestic distress, 20 from reverse of fortune, 21 from crosses in love, 18 from exalted devotion, 13 from jealousy, 8 from excessive study and watching, 7 from fright, 7 from novel reading, 6 from crossed vanity, 2 from passion for gambling.

Of the four forms of insanity, monomania, mania, demency, and idiocy, the proportion per cent. was 46.7, 36.5, 16, and 0.6. Mania and demency were proportionally most frequent among males, and monomania among females. Of 366 males, 40 per cent. were maniacs, 38 per cent. monomaniacs, and 22 demented; while of 258 females, 31 per cent. were maniacs, 58 per cent. monomaniacs, and 7½ demented. The admissions on account of monomania and demency are pretty equally dispersed throughout the hot and cold months. But mania is much more common in the former. Of 226 cases of mania, 64 were admitted in the four first months, and 62 in the last four; but in May, June, July, and August, 101 maniacs were admitted.

The cases discharged were 624. Of these 209 were cured, 194 were restored to their friends, and 221 died.

The cures were therefore one third of the total admissions,—a proportion very favorable to the establishment, when it is considered that cases of every denomination are received. If from the number of admissions those cases be subtracted which from the beginning were incurable, (that term for the sake of certainty being applied only to paralytics who were 119 in number, epileptics who were 19, and idiots who were 4,) then the cures among the remainder were two fifths. It is remarkable that of the insane military one half were cured. The cures were proportionally as numerous among the men as among the women; which is contrary to the general fact, the females cured being generally found more numerous in proportion to the total number than the males. Of the 269 cures, 115 or more than a half were maniacs, 91 were monomaniacs, and three cases of demency. Better information on the relative curability of the several forms is derived from comparing the cures with the admissions of each quality. When this is done we find that 115-226 maniacs were cured, 91-288 monomaniacs, and 3-99 cases of demency,—that is 51.66 per cent. of the maniacs,

31.8 monomaniacs, and 3.0 demented. Nearly the same proportion of female maniacs are cured as of male maniacs. M. Esquirol, indeed, states that more male maniacs are cured than female maniacs, and more female monomaniacs than male monomaniacs. But his statement is calculated to convey a false idea of the fact. The actual numbers stand as he represents; but the *proportion* of maniacs or of monomaniacs cured in each sex gives a very different result. In fact, the same proportion of the male monomaniacs is cured as of the females; and the same proportion of the female maniacs is cured as of the males.

The deaths were 221. In judging from this fact of the mortality at Charenton, a comparison must not be instituted with the admissions, because a considerable number of the deaths took place among 492 patients remaining in the Asylum on the 1st January, 1826. The only just idea of the mortality is obtained by comparing the number of deaths annually with the population. It will then be seen that on an average $73\frac{2}{3}$ die annually in a population of 490, that is 15 per cent. The mortality is proportionally greater among the men than among the women. For while the admissions are 60 males to 40 females, the mortality is 70 males to 30 females. This difference appears to depend on the greater frequency of paralysis among the males, which is invariably a fatal complication. Of the deaths 52 per cent. were cases of demency, 27.1 per cent. mania, and 19.5 monomania. There were only three cases of suicide in the three years.

The experience of M. Esquirol as to morbid appearances found after death is on the whole strongly confirmatory of his former statements on the same subject. "The lesions of the encephalon," says he, "bore no relation either to the character of the delirium, or the violence of the symptoms. Insane persons whose delirium and infirmities might have led one to anticipate numerous and extensive organic derangements of the brain, have sometimes presented only slight deviations from the healthy structure; while others scarcely delirious at all, and without any bad symptoms, have presented organic lesions of great extent and variety. It is peculiarly disconcerting to all theories on the seat of insanity, even to those which rest on the most numerous and best observed facts, that often enough no appreciable departure from the healthy structure can be detected in the brain and its membranes; and that this absence of organic derangement is sometimes met with in those who have passed through all the stages of delirium, and have lived in a state of insanity several years." Of 199 inspections, M. Esquirol found disease of the brain or its membranes in 163, diseases of the lungs, heart, or their membranes in 116, and disease of the abdominal viscera in 113 cases. In two cases the patients died of suffocation from food or other articles sticking in the pharynx or gullet. This has been at Charenton by no means an uncommon accident; and the author conceives that many of the instances of supposed sudden death from syncope during meals are cases of the same description. Sometimes it depends on organic diseases in the pharynx or gullet, but much more commonly on paralysis. General paralysis has been

a very common complication in the cases at Charenton. Of the 619 admissions 109 had this affection. Of these ninety-five were men. The proportion is much greater therefore among males than among females. The proportion, he has also found, is greater among the males of Charenton, than among those at the Bicêtre in Paris, where the poorer orders only are received. These facts appear to depend on the description of persons in whom the complication is most frequently observed, who are those addicted to venereal excesses, or to drunkenness, or who have used mercury immoderately.—*Annales d'Hygiène Publique et de Médecine Légale*. Avril, 1829.

Poisoning by Arsenic determined by Chemical Examination, seven years after Interment.—A case has recently occurred in France, in which a body was disinterred seven years after burial, and the fact of the individual having been poisoned by arsenic determined by chemical examination.

M. Orfila was asked, last June, if a body removed from the grave after such a lapse of time, could possibly afford proofs of poison having been administered; and, if so, in what manner such an investigation was to be conducted? To this question he replied, that it was very probable that the body was already almost entirely reduced to ashes; but that, nevertheless, if a sort of blackish coom was found at the sides of the spinal column, chiefly in the dorsal and lumbar regions, such mass might be analyzed in the manner pointed out in his work on Toxicology. MM. Ozanam and Ide, physicians at Lyons, where the supposed murder had occurred, were requested by the legal authorities to proceed to the disinterment of the body of a man whom they had suspected had been poisoned by his daughter in 1822, in the department of Ain. They accordingly did so, and found that nitrate of potass and hydrosulphuric acid were acted upon by the suspected matters as by arsenic. The grave had been dug in a dry gravelly soil, in which there was a little sulphate of lime; and to this circumstance must, doubtless, be attributed the remarkable state of preservation in which the body was found. The coffin was entire, formed of thick planks of fir, which internally were quite dry. Although more than seven years had elapsed since the interment, the body was recognized by the priest, by the grave digger, and even by some of the National Guard, who had assisted at the ceremony, and fired over the grave. All remembered the spot, and the individual was identified by the hair which yet remained, and by the teeth, all of which were still in their sockets, except one particular tooth, which he had lost before death; and, lastly, the joiner recognized the coffin, which had been constructed with unusual care, being intended for a person of distinction. The head, trunk, and limbs were entire, so that the stature could be measured. The chest had sunk in, the heart and lungs were blended together, and presented the appearance of a dark ointment. The whole was without smell. The entire trunk was removed, the head and extremities being regarded as unnecessary to the investigation. The portion thus reserved for examination

weighed nine pounds; of this, two pounds were set aside for a second series of experiments, in case those made on the first should prove unsatisfactory.

In these investigations, MM. Ozanam and Ide went on the supposition of arsenic being the poison—this being the one employed in the great majority of cases. The matters above mentioned were boiled, the fluid evaporated to dryness, and the residuum thus obtained dissolved in distilled water. This produced a deep colored liquid, which was but imperfectly deprived of its hue by chlorine. The distilled water charged with this extract was again evaporated to dryness. At the same time four ounces of nitrate of potass, placed in a matrass, were exposed on ignited charcoal. The suspected matter, well dried, and rolled into little portions, was introduced. Each time this was done, a deflagration was perceived. It was then allowed to cool, and the residuum again dissolved in distilled water. This solution was saturated with nitric acid, and afterwards subjected to the usual reagents, all of which indicated the presence of arsenic. Some small portions were treated with vegetable charcoal, introduced into a glass tube, and then heated. They gave aqueous vapor: soon after which small gray colored and brilliant points were seen. A grain of metallic arsenic was thus obtained. Another portion, treated with hydrosulphuric acid, furnished sulphuret of arsenic; and this, heated and acted upon by caustic potass, afforded a portion of shining matter, which was easily dissolved in distilled water, by directing upon it a current of oxygen gas. By these various experiments, the fact of a considerable quantity of arsenic having been administered was thus demonstrated at the end of seven years, affording a striking illustration of the importance of toxicology in forwarding the ends of justice.—*London Medical Journal*.

MIDWIFERY.

Case of a Stillborn Child that had been retained in the Uterus thirteen calendar months. By PETER CULLEN, Esq., Surgeon, Sheerness.

The subject of this extraordinary case is a small active woman, aged thirty-eight, in good health, and the mother of seven children, exclusive of this. About the beginning of July, 1828, she missed the catamenia, which should have appeared at that time, and soon after found herself pregnant. In October following, she quickened, and felt the motions of the child till January, when they ceased, and never returned. She had continued to increase in size till that time, but afterwards decreased, and felt only a sensation of a lump in the lower part of the belly, towards the left side, which sensation continued till her delivery. Her health was good, and she continued as active as ever.

At this time, (January,) she consulted me, when I gave it as my opinion that her child was dead, and that she would be delivered

of it on or before the completion of the nine months. She engaged me to attend her.

I heard nothing more of her till the 19th of August, 1829, when passing by her house, I was called in, and found her in great pain, like labor. An examination discovered it to be so; and about half an hour afterwards she was delivered of a male stillborn child, followed soon after by the placenta. The child seemed to have died about the fifth or sixth month, which corresponds with her account. It measured in length between nine and ten inches; weighed six ounces; was much reduced, shrivelled, and emaciated; of the color of tanned leather, without fœtor or any disagreeable smell. I have it by me now, immersed in spirits. She is at this time, (28th August,) doing well.

There is no reason to doubt the accuracy of this woman's statement, she being of good character, and all the circumstances of her condition well known to her neighbors. She fancied, after the month of January, that her pregnancy had gone off, and that all the symptoms which she had had were such as are customary to women at what they term the turn of life, or final cessation of the menses, of which she had seen none since her conception in July, 1828; and was, therefore, rather surprized when I told her she was in labor. But her age being only thirty-eight, and the circumstance above detailed, preclude the idea of the "turn of life" with her.—*Lond. Med. Gaz.* 1829.

Case of Rupture of the Uterus, terminating favorably. By THOMAS H. BROCK, M. D.—A healthy negress, about 18 years of age, was taken in labor with her first child. When called to her, I found the head within the uterus, with only a trifling dilatation of the os tinæ pressing very forcibly upon the perineum, forming the perineal tumor, and with so much force, that I thought the uterus, with its contents, would be expelled through the os externum. I abstracted blood from the arm, and supported the perineal tumor as much as I could; but in spite of all my exertions, the force of the pains continuing, the uterus was rent upwards, from the os uteri towards the fundus, for at least six inches, and the child, with the placenta, was expelled through the os externum, with only a slight laceration of the perineum.

What was still more extraordinary in this case, the patient recovered without any untoward symptom, and two years afterwards gave birth to another child, with no more inconvenience than the common occurrences in natural labor.—*Ibid.*

MATERIA MEDICA.

Spirits of Turpentine in Ophthalmic Diseases.—*Case of Amaurosis cured by Ol. Terebinth.* Wm. Spreadberg, aged 40, admitted 13th October, 1829, a man of a sanguine temperament and tolera-

bly stout habit of body, a native of Hampton, Middlesex, a blacking manufacturer by trade, served as a soldier between five and six years in the East Indies, in the foot artillery; during that period he had a slight bowel complaint; he also received a slight contusion in the lumbar region, from part of a building having fallen upon him. He had resided in England the last seven years, and says he has been in the enjoyment of good health excepting the last year or fourteen months. About a year and nine months ago, a small lump was felt as if on the anterior part of the right eye, accompanied with dimness of sight, a pain extending through the cerebrum parallel to a line drawn from the superior part of the frontal bone, towards the occipital, and of a sense of heaviness across the eyebrows. A year ago, the left eye became affected in the same manner as the right. As soon as the left eye became engaged in the malady, all objects, when looked at, appeared double, and this optical defect has increased to a considerable degree; sees things more distinctly in a feeble light, or towards the dusk of evening; the stronger the light is the more complete the double vision. Small black spots appear constantly before his eyes. When the pupils are dilated by the belladonna, a slight milky or turbid looking substance is seen. Had lived freely; tongue foul; appetite bad. Detract. sang. ex tempor. ℥xvj. cum c. Habeat pulv. jalapæ c. ℥ss.; omni mane 2 die.

20th. Says he can distinguish objects more distinctly and at a greater distance. No pain of the head; feels a sense of numbness occasionally in the cerebellum. Tongue foul; appetite improved. Bowels open; double vision continues; the milkiness of the eye has disappeared. Repetatur detract. sanguin. ex temp. Habeat pil gambog. c. pil hydr. gij. h. s. sulph. magnes. ℥ij. in aquæ ℥ij. mane sequente.

22d. No pain or uneasiness of the head; dimness of sight and double vision continue. Tongue foul; appetite improved; bowels open; pulse regular. Distinguishes objects at a greater distance today, but last night he experienced a greater degree of dimness in consequence of the formation of a viscous secretion from the eyes. No morbid appearance can be seen in the external part of either organ. Says he has been subject to occasional attacks of the rheumatism, but feels none at present. Was not cupped the last day. Repetatur detract. sang. ℥xvij. ex temp. omit pil. Habeat spt. terebinth. ℥j. h. s. sulph. magnes. ℥ij. mane.

27th. Improved in every respect; can see better; double vision greatly diminished; feels more active and comfortable. Habeat spt. terebinth. ℥j. mistur. mucilag. ter die. Pone in oculo spt. rorismar.

Oct. 3d. Vision improved. Says the drops made his eyes feel comfortable. No uneasiness in the urinary organ from medicine. Repetatur medicamentum.

10th. Says he is much better. Only one spot appears now before the right eye, and none before the left. Sees better; appetite improved; bowels regular. Medicine has produced no unpleasant effect. The spirit of rosemary caused a considerable discharge

from the eyes, which was followed by a very agreeable sensation. Cont. medicamentum.

17th. The dimness varies; says he thinks it less at one time than another. The black spot exists before the right eye when viewing any object. Cont. medicamentum.

Inflammation and Opacity of the Cornea, treated with the Spirit of Turpentine. Peggy O'Donnell, aged 26, admitted 20th Oct., 1829, a native of Ireland, a servant, of sanguine temperament, appears in good health, with the exception of her eye; reports that about a month ago she received a slight blow upon the eye, which was immediately followed by an unpleasant and painful sensation. The pain increased, and redness of the anterior part of the eye ensued. She applied, of her own accord, four leeches one day, and two another day, and cold bread and water poultice; the leeches produced some relief, but the poultice none at all. At present the eye appears irritable, and considerably inflamed. The vessels of the conjunctiva, covering the sclerotic, are so much gorged with blood as to give it the appearance of a dark pink patch, about the size of the white of the thumb nail, having in its centre a few pustules. Vision is very obscure, can merely distinguish the shade of bodies. Has some pain in the eye during the day, but feels it very acute when she becomes warm in bed. Habeat spt. terebinth, ʒj. ter in die.

22d. Inflammation less, feels the eye improved, and more comfortable. Cont. medicam.

24th. Improving. Cont. medicam.

25th. Cont. spt. terebinth.

27th. Can see a little better; cornea more transparent; vessels less distended with blood; eye irritable. Cont. medicam. Applicatur vesicat, pone aurem sinistram, pone in oculo vini opii guttas. ij.

31st. Repetatur spt. terebinth.

Nov. 3d. Considerably improved; inflammation and irritation very much decreased. Cont. medicament.

12th. Cornea clearer; no pain of the eye; sees and feels better. Medicine has produced a desire to make water more frequently. Habeat spt. terebinth. ʒj. bis de die et decoct. hordei; c. pulv. g. Arab. et sacch. ad libitum.

13th. Cont.

17th. Cont.

19th. Cornea almost clear; sight very much improved; no pain or uneasiness; feels no irritation in the urinary organs; bowels regular; conjunctiva natural. Cont. spt. terebinth.

Inflammation of Right Eye, with a purulent discharge. Daniel Garrett, aged two years, admitted 3d Nov., 1829; lymphatic temperament, unhealthy appearance, bloated countenance. The mother reports that an eruption appeared on the face and lips ten days ago, and that two days after the right eye became inflamed. At present the conjunctiva, lining the palpebræ, is very much thickened and studded with large granulations of a deep florid hue. There is also a discharge of purulent matter. Cornea is clear; the eye is very irritable, and cannot be opened, in consequence of considerable

tumefaction of palpebræ. The face is covered with scabs. Pone in oc. ung. argent. nit.; applicatur ung. nit. hydr. diluti faciei; habeat pulv. rhei. gr. vj. hydr. c. cret. gr. ij. h. s. et. liquor. potassæ gutt. cum lactis \bar{z} ijj. ter die.

5th. Inflammation less; eye and countenance improved. Cont. medicamenta.

10th. Has not attended since the 5th. He opens his eye today of his own accord. Inflammation considerably diminished; bowels open. Cont. medicament.

19th. Has not attended since the 10th. Inflammation and discharge of purulent matter; much lachrymation and irritation. Inflammation and thickening of conjunctiva not so great as at first. Rep. medicam.—*Lond. Med. and Surg. Jour.*

Myrrh.—The following communication respecting myrrh, has been made to MM. Saigy and Raspail, editors of the *Annales des Sciences d'Observation*, by M. Bonastre.

I have succeeded in discovering that, in commerce, even at Paris, there are two very distinct species of myrrh; the true or ancient, and the false or modern; this last is said to be brought from India; it is that mentioned by Pliny, but the second of his species, which, according to this author, came by the Red sea, and by caravans to Alexandria. I think that the second of my species, or the false, is that which MM. Ehrenberg and Hemprich discovered in Nubia, and which they refer to the *Balsamodendron myrrha*.

By the following characters they may be distinguished from each other. Equal parts of nitric acid will cause the development of a color, rose red, of the lees of wine, or sometimes violet, in the tincture of true myrrh; and a light yellowish color in the new myrrh, which is the false myrrh. Of eighteen specimens which were presented to me for real myrrh, sixteen only evolved a red color by nitric acid. The two others were not colored; one belonged to bdellium, and the other was a sort of rosin.—*Ibid.*

Combination of Belladonna, Ipecacuanha, and Sulphur in Pertussis.—In Horn's Archives for 1827, Dr. Kahleiss first directed the attention of physicians to this combination, the efficacy of which he had established, by its employment in nearly one hundred cases of the disease. In Hufeland's Journal for February of the present year, he states that, since the appearance of the communication alluded to, he has had further opportunities of testing the value of the remedy, in consequence of whooping cough having several times prevailed epidemically. He directs for a child two years old, pulv. rad. belladon. gr. iv. pulv. Doveri, gr. x. flor. sulph. Div. sacchari \bar{z} ij. M. f. pulv. xx. One of these powders is to be taken every three hours, and between each, a teaspoonful of the following mixture: syrup. liq. \bar{z} ij. aq. chamæmeli \bar{z} i; acid. hydrocyanici Vauquelinii gutt. xii. M.

With many children of the above age, and even some months younger, the dose of the belladonna here directed, will not be sufficient to reduce the frequency or violence of the cough. In these

cases, it must be increased to five or six tenths of a grain in each dose, and an additional drop or two of the acid may be added to the mixture. For children of from nine to fifteen months, each powder should contain from an eighth to a sixth of a grain of the belladonna; one fourth to three eighths of a grain of the Dover's powder, and three fourths of a grain of sulphur. For a child three years old, one fifth of a grain of belladonna; four to five years old, one fourth of a grain; six to eight years old, three eighths of a grain; ten years old, half a grain.

In some cases, the effects of the remedy are not perceptible until it has been continued for five or six days. The paroxysms of the disease will now become less frequent, and soon after diminish in severity. By eight, ten, or at the furthest twelve days longer continuance of the remedy, the disease will be completely removed.

In a few instances, after two to four days employment of the above prescription, in the doses indicated, a dilatation of the pupils, and a scarlet efflorescence over the whole body, will be produced. The remedy in such cases must be omitted for 24 or 36 hours, and then resumed with a less proportion of the belladonna. The mixture containing the acid, need not, however, be discontinued.—*N. Am. Med. Jour.*

Specific for the Hooping Cough.—In Rust's Mag. f. die gesamt. heilk. (No. 2, 1828,) it is stated that Dr. Meyer, of Minden, has, in a few days, been enabled to remove all the symptoms of pertussis, by the external application of morphia. He directs a small blister to be applied over the præcordia; the detached cuticle being removed, the exposed surface is to be sprinkled over with half a grain of morphia, rubbed up with starch. The morphia to be repeated every evening. The only internal remedy he employed was an emetic. If necessary, the blister may be reapplied every third day. In five cases, the disease was so far diminished in eight days, that no further treatment was considered necessary.—*Lond. Med. and Surg. Journal.*

Intermittent Fevers treated by the Sulphate of Quinia, applied according to the Endermic Method.—In the *Annali Universali di Medicina*, for November and December, 1828, Dr. Speranza gives an account of his successful treatment of fifteen cases of tertian fever, by the endermic method of applying the sulphate of quinia. In all of these, the fever had appeared some days before he prescribed for them. In none except two was there any very manifest local irritation; and in these latter, the symptoms were gastric. Without giving to any of them purgative medicines, he had immediately a blister applied, and in most instances, on the day of the febrile paroxysm: the sulphate of quinia was put on at the end of the fit, or the beginning of the apyrexia. The arm was the place chosen for the application of the blister, as the most convenient for dressing. The skin was first strongly rubbed with concentrated vinegar, in order to hasten the formation of the serous sac by the blister. Immediately after raising the epidermis, eight or ten grains of the

salt, mixed with a small quantity of ointment, were placed on the denuded surface. The sore was dressed on the second day, by removing whatever remained on its surface, either of ointment or membranous concretions. From the appearance of the residue, there seemed to be about one half of the sulphate of quinia absorbed.

The adoption of this method was followed in most cases by the disappearance of the fever even after the first application of the medicine, and without the necessity of recourse to a second.

Not only were fevers primitively of a tertian type treated in this way, but also others, which had been at first continued, before being intermittent. In no cases was there a relapse, which is quite common after the use of sulphate of quinia internally. In some subjects, in whom different organic affections required the use of evacuants or tonics, after the disappearance of the fever, this latter was not found to return after this secondary treatment.

No irritation of the neck, of the bladder, or urinary organs occurred after the application of the blister in the febrile paroxysm. In some cases the inflammation of the arm, consequent on vesication, ran so high as to require topical remedies.—*Lond. Med. and Surg. Journal.*

Gathering of Medicinal Roots.—According to M. Kittel, roots should always be gathered in the autumn. This rule is without exception for all plants not annuals, with this difference, that the roots of biannuals should be gathered in the first year, while those of the rest may be gathered any year in their lifetime; but the roots gathered before the flowering year are always more charged with active principles than those which have often supported a stem and flowers, so that roots of the first, second, and third year are better than older roots. This is especially the case with aromatic and narcotic roots, as arnica, briony, gentian, belladonna, angelica, liquorice, sarsaparilla, dandelion, fennel, &c. &c. The volatile bitter, aromatic, nauseous, and, in general, all active peculiar principles, are more abundant in the cortical layers of the roots than in the woody part.

For these reasons, M. Kittel says, that fresh roots should never be allowed to be bought and sold for medicinal use, except in the autumn and winter.—*Repertorium der Pharmacie.*

Analysis of Ipecacuanha Branca, Root of the Viola Ipecacuanha.
By M. VAUQUELIN.—The root of the ipecacuanha branca is of a pale white, divided into many branches, of the thickness of a writing pen, much twisted, and contracted at unequal intervals. Its fracture is short, the odor of it disagreeable, the taste acrid and nauseous, the ligneous part is thicker than the bark. The substances which compose this root are as follows by weight: Emetine, 1.50; resin, 0.60; gum, 0.20; albumine, 0.30; starch, 3.20; matter crystallized in scales, 0.85; ligneous matter, 7.00; fatty matter and wax, an indeterminate quantity; total, 15.95; loss, 0.05.—*Journal de Pharmacie, Juin.*

Preparation of Hartshorn Jelly.—The following process is due to M. Ferrez: four ounces of rasped hartshorn is to be steeped in eight ounces of water, acidulated with sixty grains of muriatic acid for ten minutes, and then washed carefully in two or three waters. It is then to be boiled with fresh water for half an hour, pressed through a cloth, and the liquid filtered while hot. This fluid is the jelly, which being qualified by sugar or other ingredients and boiled slightly, gives, upon cooling, a perfectly clear and good jelly for the table.—*Jour de Pharmacie*, 1828.

On the different Genera and Species confounded with Cinchona.—M. De Caudolle has published a short notice on the different genera and species of bark, which have been confounded under the name of cinchona. The following are his conclusions:

1. It results from the enumeration made, that the 46 species of trees or shrubs, until now more or less confounded in books, compose eight distinct genera, namely, *cinchona*, *buena*, *remigia*, *exostemma*, *pinkneya*, *hymenodectron*, *luculia* *danaïis*.

2. What is known of the bark of these eight groupes appears to indicate a dedided connexion between the external forms and the medical virtues, and in particular, that although all these barks may be usefully administered in intermitting fevers as bitter or astringent, it appears that the barks of *cinchona* only contain quinia, and that they probably are those which only are endowed with antiintermitting properties.

3. The yellow bark of medical men is produced from the *cinchona pubescens*, and probably also in part from *c. purpurea* and *c. humboldtiana*. The orange bark from the *c. lancifolia*; the red bark from the *c. scrobiculata* and the *c. magnifolia*; and the pale bark of best quality from the *c. condaminia*, while that of inferior quality comes from a mixture of many species.

4. The eight genera obtained by the dismemberment of the old genus *cinchona* are sensibly in the relation of the geographical distribution of these vegetables over the globe, *luculia* and *hymenodectron* in the East Indies, *danaïis* in the southern isles of Africa, (Bourbon and France,) *pinkneya* in Carolina and Georgia, *remigia* in Brazil, *buena* and *cinchona* in Peru and the Andes of Bogota. The genus *exostemma* is an exception to this regularity; but it may be observed that true *exostemma* lives in the Antilles, *Pseudostemma* in Brazil; and the brachyanthes are divided between America and the Philippine islands, with this circumstance, that the species of the Philippines form perhaps a distinct genus.—*Bib. Univ.* xli. 144.

MISCELLANIES.

Destruction of Vermin in Ships by Steam.—By letters from India, it appears that the application of steam has been found wonderfully efficacious in cleansing ships from vermin, and especially the white ant. A steamboat (the Comet) was placed alongside a merchant

vessel, and steam from its boiler conveyed by a very simple system of pipes into the hold of the latter, the apertures to which were closed as well as they could be. The operation was continued for several hours; and there is no reason to believe that it was not effectual, and will prove a valuable process in the navy. Besides the direct object of cleansing the ship, another advantage accrued, from the discovery of every leaky place existing, by the oozing of the water through them, in which way leaks were made manifest, that could not be found out otherwise. The expense is said to be very moderate; and it is further stated to be the only process at present known, not even excepting sinking, which effectually destroys the white ant.—*Quarterly Journal of Science, Literature, and Art.*

On the Preparation of Food from Bones.—This important subject has been long experimentally treated by M. D'Arcet, and has been brought before the public by the same philosopher, in a memoir published in the *Annales de l'Industrie* for 1829. It has been abstracted by the editors of the *Annales de Chimie*, from whose account we take the following points.

Bones require to be divided, under the point of view in question, into two classes, those which are compact, flat, or cylindrical, containing but little fat, and which are sold at a high price to turners, button makers, comb makers, &c., and those which remain after this selection has been made, among which are included the spongy heads of great bones, and the extremities of the flat ones. The former class of bones having at all times their appointed uses in trade, it is the latter which is to be resorted to for food.

According to analysis, the latter bones contain per cent., earthy matter 60, gelatine 30, fat 10. The heads of large bones contain nearly 50 per cent. of fat. The bones of mutton and roast meat often yield a rancid or tallowy fat, and should be reserved for separate treatment.

One hundred kilogrammes (220.6 lbs.) of bones contain 30 of gelatine; 10 grammes of gelatine are sufficient to animalize half a litre (about a pint) of water, at least as much as is done in the best bouillon of the kitchen; therefore, one kilogramme of bones will prepare 30 bouillons of half a litre each, but one kilogramme of meat will only yield 4 such bouillons: from which it follows, that, for equal weights, bones gives to water seven and a half times as much animal matter as meat.

One hundred kilogrammes of butchers' meat contain about 20 of bones; the meat will make about 400 bouillons, but the bones would serve to prepare 600, so that in extracting all the gelatine from the bones of a given quantity of meat, 3 bouillons may be prepared with the bones, while usually both bones and meat only afford 2. With the bones contained in the meat consumed in the department of the Seine only, there may be prepared 800,000 bouillons daily.

The gelatine might be extracted by steam from the bones while whole, but it is better to crush them; but if this be done by successive blows, they acquire a bad smell: they should be moistened, and then crushed, if possible, at once, either by channelled cylinders,

or under a heavy weight. In the small way, masses of wood will serve, being faced with channelled cast iron plates. The pieces requiring a second operation should be remoistened. The bones should be used immediately after being broken, or else preserved in fresh water, or better in water nearly saturated with salt. If the bones be subjected for a time to a temperature of 260° or 280° F., or to high pressure steam, they break more readily; but then a part of the fat is altered, and the process should only be employed for those bones which contain no fat, or are old and dirty.

The preservation of the bones becomes an important matter, especially as they readily putrefy, and then one part of their jelly forms ammonia, which, combining with the undecomposed jelly, takes from it the property of gelatinizing when cold, and renders it soluble in water. They should first be freed from the fat, which otherwise in time renders them rancid. The broken bones boiled with water yield much fat, but still retain enough to render them rancid. The process of separating the fat by saponifying it with soda, is not a good one, because the gelatina is also altered. Even the fresh bones may be preserved by being salted, but the products are injured, and the process expensive. The best method is that adopted by Plowden, for the preservation of meat, namely, dipping them into a strong solution of the juice of meat, or jelly, and drying them in the open air. For this purpose, a solution, containing one fifth of dry jelly, was heated up to 180° or 190° F., and the bones, previously cleaned, broken, and freed or not from fat, dipped into it; they were then dried upon nets in the air, and again dipped, &c., once or twice more, to thicken the film of gelatine. They were then perfectly dried in a stove at temperatures from 70° to 80° F.

Papin proposed to separate the jelly from bones by the use of high pressure steam, but this process gives an empyreumatic flavor, and destroys gelatinizing power; long boiling of the rasped bones in water, at common pressures, is tedious and expensive, and does not give all the jelly. Fifteen years ago, M. D'Arcet proposed to use acids in extracting the jelly, and thinks it was only because the process was not put into clever hands that it failed.

While studying the process of Papin, M. D'Arcet removed the objections to it, by improvements in the apparatus required, for which he took out a patent. The most advantageous method appears to consist in exposing the bones to the action of steam, having a feeble pressure, the vapor condensing in the pores of the bone, first expels the fat, and then successively dissolves the gelatine.

The presence of the fat in bones complicates the process; under the influence of high pressure steam, the carbonate of lime present acidifies it, and forms an insoluble soap, which opposes the solution of the gelatine. It is therefore necessary, first, to separate the fat, which is done either by boiling the broken bones in a covered cauldron with water in the usual way, or in exposing them to steam of ordinary pressure.

The extraction of the gelatine by uncompressed steam requires at least four days. The crushed bones freed from fat, or not, are to be placed in a cylindrical basket of tinned iron wire, which nearly

fills a metallic cylinder, in which it is to be suspended. The latter being closed, steam of common pressure is to be sent in, which at first fuses the fat, and dissolves a little gelatine; after this, the pressure is to be increased. The liquids are to be withdrawn from the cylinder by means of a cock placed below. The gelatinous solution is obtained more or less concentrated, according to the slowness or rapidity with which the steam is condensed, and the divided state of the bones. The following are the points to be attended to. 1. The bones should be broken in small pieces, and the smaller in proportion as they are more compact, more charged with fat, and require to be freed from it the more rapidly, or at a lower temperature. 2. The crushed bones should be previously freed from fat, either by means of boiling water in common boilers, or in cylinders by low pressure steam, or in water heated by steam. 3. The pressure of the steam should be diminished, and the duration of the operation increased, in proportion as it is required to obtain a purer and stronger jelly. 4. It is most economical to prepare very strong gelatinous solutions, which are afterwards brought to the proper strength by boiling water: to obtain this result, care must be taken to moderate the condensation in the apparatus. 5. The degree of pressure most convenient is that of 960 millimeters ($37\frac{3}{4}$ inches) of mercury, corresponding to a temperature of 223° to 224.5° F. Stopcocks placed on the vapor tubes serve to regulate the pressure at will.

The solution of jelly comes from the apparatus perfectly clear, unless agitated by violent expulsion. Being without taste, it may be sugared or flavored at pleasure, for the preparation of table food. Reduced until it contains only two hundredths of dry jelly, it is equally charged with animal substance, as the best bouillon of the kitchen, and will serve either to animalize vegetable food, or, after being salted, colored, and flavored, to replace ordinary bouillon. The salt which is most advantageous in giving it an agreeable taste, is, according to M. Braconnot, a mixture of 70 parts of common salt, and 30 chloride of potassium. If, after it comes from the cylinder, it is flavored with vegetables, or the juice of meat, and evaporated, gelatine or animal tablets are obtained.

The fat in bones is easily saponified by the action of high pressure steam; it is therefore better to separate it by boiling water, or even in water at a lower temperature; the fat is better the lower the temperature has been. The fat is easily given out in vapor, only slightly compressed, but the quantity saponified and remaining as an insoluble compound with the lime, amounts sometimes to four or five hundredths of the weight of the bones, which loss it is desirable to avoid.

An apparatus, consisting of four cylinders, has been put up at the Hôpital de la Charité. Each cylinder is a metre (39.37 inches) in height, one third in diameter, contains about 40 kilogrammes of bones, and gives about 1000 bouillons per day.—*Ann. de Chimie*, xl. 422.

DOMESTIC.

Case of Threatened Abortion, arrested by the application of a Blistering Plaster. By JABEZ W. HEUSTIS, M. D., of Cahawba, Alabama.

On the night of the 7th of February, 1830, I was called up in haste by a note from Mr. Y., requesting my immediate attendance on Mrs. Y., who was represented as being threatened with abortion. On my arrival I found her in a state of much uneasiness, with strong bearing down pains, returning at irregular intervals of from fifteen to thirty minutes; the pains being particularly severe in the small of the back, and in the right iliac region. On several occasions within the last twenty-four hours, there had also been clots of blood discharged per vaginam. Though there appeared to be little or no general vascular excitement, yet for the purpose of relieving the plethora of the system, and taking off or moderating the local impetus, I withdrew about twenty ounces of blood, and then exhibited an anodyne of forty drops of laudanum. I remained about half an hour, and then returned home, having left instructions to give me notice, should the threatening symptoms still continue, or become more aggravated.

Early in the morning I again visited my patient. Finding that the pains had increased in severity, and become more frequent, I directed the repetition of the anodyne. I was, however, soon convinced that nothing could be hoped for from this course; and recollecting having read of the successful employment of blisters in similar cases, by Dr. Jackson of Pennsylvania, I determined, as a last resort, to test the efficacy of the practice. With some little persuasion the lady consented to the experiment. The pains had continued at intervals for about thirty-six hours, and at every recurrence were becoming more and more severe, threatening speedy abortion. I was, indeed, extremely apprehensive that notwithstanding every effort, abortion would ultimately take place. But in this I was happily disappointed. Upon enquiry in the evening, I was informed that every alarming symptom had subsided from the time the plaster had commenced *drawing*, and that nothing but the smart and uneasiness of the blister were now complained of. I had thought in the first instance of applying the blister to the small of the back, but reflecting upon its extreme inconvenience in this situation, I directed its application to the right iliac region. To ensure every advantage, I made the plaster of ample dimensions, being at least as large as the two hands.

In two days after the application of the blister, the lady was able to leave her bed and attend to her domestic concerns.

The above case, with others that have been already published, are sufficient to call the attention of physicians to this valuable and important remedy. And the profession, with strong assurance, may now congratulate itself in having at command a means capable of arresting the progress of the most urgent cases of threatening abortion. This is a desideratum that has long been wanted; and one,

which, had it been known, would have contributed greatly to domestic happiness, and added not a little to the numerical force and population of the world.

Of Emphlysis Vaccinia Degener, or Degenerated Cowpox. By C. C. BLATCHLY, New York.—Dr. Good has considered cowpox as genuine, spurious, and degenerated.

The present cowpox of this city, and I believe throughout the United States and elsewhere, has been degenerated by causes that deserve investigation. I know that a great alteration has occurred in the appearance and effects of inoculated cowpox, since 1803. Then the *scab* of the kinpox had the color of dark mahogany: but now, and far a long time past, its color is *dun* or clay colored. Then I found it impossible to communicate the smallpox to my patients: now I find I can affect the system with it partially. This partial affection of the system is called the *varioloid*.

Hence, I have for some years so regretted this degeneracy of the cowpox, that I have much neglected it, and plainly mentioned to those requesting me to vaccinate, that I could not obtain any genuine virus; and that our present virus did not perfectly protect the vaccinated from smallpox.

I am induced, therefore, to publish this communication to the public, to excite them to use such means, and take such care as to ensure genuine vaccination. None should be more attentive and careful than medical practitioners; and I have mentioned this matter to many of my medical brethren. But genuine vaccine virus is not yet to be found; I do not discover any efforts to ensure it.

The degeneracy of cowpox is probably owing to its passing often through the human systems—to its being injured by eruptions, inflamed scratches, sore ears, scald head, (*tinea capitis*,) &c.—to virus taken too late or kept too long—and to other causes unknown.

It is found by experience that cowpox is rendered milder by passing through any human subject. For a person inoculated immediately from the affected cow, is said to suffer invariably more than when one human being is inoculated from another. Hence, it is to be concluded that the human system has a modifying and degenerating influence on kinpox; and this should convince us of the propriety of supplying, at times, kinpox institutions with genuine *vaccinia*, immediately from the cows. This could easily be done, if the remark be correct, that degenerated cowpox produce genuine cowpox, when inserted into the system of cows.

Dr. Good states that the metropolitian stations have informed us that only *eight* out of nearly sixty-seven thousand vaccinated, since the establishment of the board, had taken the variolous infection. But latterly, it appears very different. For Dr. Gregory, of the vaccine hospital, has stated in his table, that in the year 1810, the proportion of cases of smallpox succeeding vaccination to the whole number of admissions, was as *one in thirty*: in 1815, it was as *one in seventeen*: in 1819, it was as *one in six*: in 1821, as *one in four*: in 1822, as *one in three and a half*.

This is an alarming report of the diminution of the prophylactic

power of cowpox ; and ought to induce the philanthropic supporters of the kinpox institutions to establish rules that shall prevent such appalling results ; and my object in writing this, is to excite such attention in them and others.

Case of retained Placentæ, one of which continued to grow thirty-eight days after miscarriage. By G. F. H. CROCKETT, M. D., of Woodford County, Kentucky.

Mrs. C—, æt. 26, of sanguineo-bilious temperament, plethoric habit, and healthy, was married in May, 1824. July 4th, 1826, she aborted at the end of the fourth month. She was not pregnant before or after this, till 1829. July 5th, of this year, at 4 P. M., she miscarried at the end of the tenth week. Twenty-two hours after, a second child passed: not more than an ℥j. of blood was lost in the whole affair. The afterbirth not appearing, her friends felt some apprehension for her safety. I endeavored to quiet them by telling them that it was sometimes retained for several days ; that interference would be improper in her case, unless other symptoms than those present should make their appearance ; and that I would attend her closely, and would, I believed, be able to guard against danger. I advised Mr. C. to consult an experienced accoucheur in relation to her case, who concurred with me in opinion.

In two or three days after the accident, she was almost as well as before, and was soon able to go about as usual. I directed her to keep her bowels constantly a little laxative, by the use of pills, principally aloetic, and to use, twice a day, injections, per vaginam, of camomile infusion, acidulated with the hydrochloric acid. I saw her frequently for two or three weeks, during which time she appeared to be entirely well, except, as she expressed herself, the uterus appeared very nearly, if not quite, as large as before the miscarriage. Supposing that in this she might be mistaken, (that the secundies being small might have passed unperceived,) I ceased my attendance, merely directing her to continue the course previously laid down. She attended to her business, exercised, rode on horseback and in gig, as usual.

In the afternoon of August 9th, a slight red discharge appeared, which she supposed to be the return of her catamenia; it gradually increased, and on the 11th was accompanied with some pain. At 4 o'clock, P. M., on the 12th, I was summoned in haste, and found her with violent pains and considerable flooding. She had been put in a proper position ; refrigerants applied, and the solution of sulph. alumine administered without effect. She was yet strong in muscle and pulse. I took ℥iv. of blood from the arm, which abated the force of the latter, and gave her acet. plumb. grs. xv. The flooding was very much lessened in ten minutes, and in twenty-five or thirty after, the lead causing sickness, she vomited, and while in the act, "the long looked for" placenta passed, entirely healthy, natural, destitute of fœtor, and as large as it would have been had the process of fœtal gestation continued without interruption until that time. No vestige remained of the point of insertion of the funis umbilicalis ; the arteries and veins seemed to have inosculated, and

a perfect circulation to have been established and kept up throughout the placenta. The membranes seemed to have sloughed off. The flooding soon after ceased entirely; she rested well during the night, and was quite smart next morning.

Twenty-four hours after the appearance of the first, she was, without the least pain or interference, delivered of a second placenta, which also was healthy in appearance and destitute of fœtor, but very small. From this time she did well, and had a speedy recovery of her usual good health. The placenta being washed clean and immersed in diluted alcohol, were weighed twenty-four hours after their delivery; the first weighed 21 drachms, and the last 100 grains.

From the circumstances of the case, it would seem probable that there was no rupture of the vessels between the placenta and the uterus, at the time of miscarriage, and that the small quantity of blood lost was discharged at the rupture of the cords. From the period of the miscarriage to that of the delivery of the placenta, there was sometimes hardness of the breasts, alternated with flaccidity and considerable secretion of milk.

During both pregnancies, Mrs. C. was much troubled with constipation; and from the commencement to the interruption of the last, with unusually severe gastric irritation, which produced much sickness and vomiting.—*Transylvania Journal of Medicine.*

Case of Consumption relieved by Truncating the Uvula. By AUGUSTUS W. MILLS, M. D., of Winchester, Kentucky. Communicated in a letter to Professor Caldwell.

Dear Sir—In the course of your lectures delivered in the winters of 1826-7—1827-8, you suggested the propriety of cutting off the uvula with a view to cure a certain description of consumption, which is the result of an elongation of that muscle. I have recently been led to perform the operation; and it is to you that I feel indebted for the credit which the successful termination of the case has given me.

The subject is a negro man, aged 32 years, the property of Dr. Field, a medical gentleman of this neighborhood. He had been affected with a most distressing cough for the last six or eight months; so much so that sleep could only be procured by large and frequently repeated draughts of laudanum. He had undergone the usual treatment for phthisis pulmonalis; had been purged, bled copiously, and blistered frequently; but he did not derive the least benefit from any of the above mentioned remedies. He applied to me about the middle of April, at which time he was very much emaciated; and it was with considerable difficulty that he could walk unsupported the distance of fifty yards. After giving me the history of his case, I was at a loss to know what course to pursue. I gave, however, some alterative medicines, and directed him to return on the day following. He had not left my room long before it occurred to me that his disease proceeded from an elongation of the uvula. He returned on the next day, and, upon examination, I found the uvula hanging down on the root of the tongue. Judge my gratification when I discovered the cause of his disease, and knew that by a very simple

operation I should cure him, contrary to the expectations of every one who had seen him. I determined to cut off that portion of the uvula which produced the cough, and immediately proceeded to its excision, which I effected with little difficulty, having no other instruments than the forceps and curved scissors. I took off about three fourths of an inch of the diseased uvula, and about half an inch more sloughed off afterwards. In the course of ten days my patient was entirely restored to health. He has had no cough from the time of the operation, and a course of the blue pill entirely removed the constitutional disturbance of his system.

That portion of the uvula which I took off, had very nearly the firmness and consistency of cartilage. The blood lost by its removal would not amount to a tablespoonful.—*Transylvania Journal of Medicine.*

Diagnosis of Pregnancy by the Stethoscope.—Our readers are probably aware that M. Kergaradec long since applied that invaluable instrument, the stethoscope, to ascertain the condition of the fœtus in utero, and that many European physicians, following his example, have availed themselves successfully of the same test. In this country no attempt of the kind has hitherto been made. Dr. Fisher, the very able author of the interesting work on smallpox, which we noticed last year, has applied it with the following results, which we state in his own words.—*Ed. N. Y. Med. and Phys. Jour.*

In every one of the sixteen individuals that I have examined, I have heard distinctly, and could count, the pulsations of the heart of the fœtus. In about two thirds of the cases, these pulsations were loudest and most distinct on the left of the linea alba, and in the left side of the womb. In a minority of the patients, the pulsations were most distinct in the opposite side of the womb and median line of the abdomen; and, in two or three instances, they were most audible immediately under the linea alba, and at the distance of two or three inches below the umbilicus. In which side soever of the womb or of the median line the child was, by the sense of touch, found to be situated, in that the pulsations of the fœtal heart were, in every instance, most audibly and extensively heard. In most instances, I experienced no difficulty in detecting these pulsations; when the woman was very fleshy, however, or when the uterus contained an unusual quantity of liquor amnii, I was obliged, in order to recognize them perfectly, to press the instrument with considerable force on the abdomen, and to command perfect silence in the room. With these precautions, I have never failed in hearing the heart's action whenever I have examined for it, and in being able to number its pulsations. The noise produced by the friction of the clothes, by the peristaltic motions of the bowels, or by some sudden muscular contraction of the patient, would indeed render them obscure for a moment, but it was only for a moment. The action of the fœtal heart resembles, in all respects save in frequency, that of the adult heart, and cannot be mistaken even by the unpractised ear. In the language of my notes taken at the bedside, "the action of the fœtal heart is characterized

by two sounds or pulsations; the pulsations are loud and clear, and those of the ventricles can be plainly distinguished from those of the auricles, almost so much as in the adult heart. There is the gradual and deep sound of the contraction of the ventricle, which is immediately, and without interval, followed by the clear and valvelike sound of the contraction of the auricle;—a momentary rest of the organ now follows,—then occurs again the gradual and deep sound of the ventricle, followed by the clearer and sharper one of the auricle. There is no evident impulse communicated to the instrument by these pulsations, nor do I discover that the motions made by the mother in turning from side to side cause any variations in the pulsations of the fetal heart: They continue to be regular and uniform during these movements, unless some convulsive motions of the fœtus happen at the same time, in which case they increase in rapidity.”

The space over which these pulsations could be heard, their number, and the point of elevation in which they were strongest and most distinct, varied in different individuals and at different months of pregnancy. Generally speaking, they were audible over a space of seven or eight inches long, and five or six broad. In some, I have heard them from the groin to the navel, and even beyond it; and from the superior spinous process of the ilium of one side, to within two or three inches of that of the opposite side. In others, they were limited to an area of four or five inches. Their number varied from 118 to 155 in a minute, in different females and at different periods of gestation. In the earlier periods of pregnancy, they were more frequent than in the latter periods. They are generally uniform and regular in their succession and number, but, when the child moves suddenly, or when any convulsive motion takes place in its limbs, then the action of the heart becomes so rapid that it is difficult, and sometimes impossible, to count its pulsations. The spot where the pulsations were most audible, particularly during the last month of pregnancy, and under which the heart was most probably situated, was generally about three inches from the navel, on a line extending from it to the middle of the groin. This spot, however, varied in its situation in the different months, and when the patient turned from side to side.

The earliest period at which these pulsations were heard by the French author, was the sixth month; but I have heard them earlier than this. The first time that an opportunity occurred to me to examine the womb of a pregnant female with the stethoscope, was on the 18th day of October last. This female then told me that she had then gone just four months and a half with child. She dated her conception from the first day of June, and insisted that she could not be deceived in the date; for she declared that she had not for some time previous to, nor since “*artillery election day*,” had illicit intercourse with any man. Soon after her celebration of this day she began to experience the signs common to conception. The menses, which always appeared in the middle of each month, had not taken place since the 15th of May. About the middle of September, she experienced what she called the quickening. On

the 18th of October the pulsation of the fœtal heart were distinct and audible through the instrument, and amounted to 155 in a minute. My examinations of this individual were frequently repeated until she was confined, and during every one of them I could hear, with greater or less facility, the action of the fœtal heart. This woman was confined on the 10th day of February, and, consequently, *twenty days* earlier than she ought to have been, according to her own reckoning. If it was true that she conceived on the 1st of June, as she was sure she did, than the pulsations of the heart of the fœtus were heard and counted as early as between the fourth and fifth month of pregnancy; or, supposing that she was mistaken in the date of her conception, and that she actually carried her child the full term of nine months, even then the facts above stated show that the pulsations of the fœtal heart were heard at the expiration of *five months and eight days* after conception had taken place, which is about a month earlier than noticed by Kergaradec. This is the earliest period that I have heard, or have had an opportunity of examining for the fœtal pulsations; but, from the ease and distinctness with which I heard them at the period just stated, I doubt not but that they might have been detected much earlier. I have already observed that these pulsations preserve the same character at the different periods of pregnancy,—I will further observe that they continue to be heard even during labor, and during the strongest contractions of the womb. Their number and regularity are the same, so long as the body of the child is in the womb; but, immediately after it passes from that cavity, they are no longer to be detected over the abdomen.

Besides the stethoscopic phenomena now mentioned, I have heard, in most, but not in all of the cases stated, the “simple blowing pulsation” described by our French author, and which he denominates the “placental sound.” The region in which, and the space over which, it could be heard, varies in different individuals and at different periods of gestation. I generally heard it more audibly in the upper and anterior portion of the womb, and almost always in a part of the organ opposite to that in which the fœtal pulsations were heard. If these were observed on the left side of the linea alba, then the placental sound was usually to be discovered on the right side of this line, and vice versa. In one instance, the sound proceeded from the lower part of the womb, near the pubic region; and, in a female yet to be confined, the sound can be heard on each side of the fundus of the womb, but cannot be distinguished in the central and most projecting part of it. In this last case, the placenta is probably attached to the upper and back part of the uterus, having the child immediately in front of it. The place of the placental sound was, in some cases, limited to three or four inches in extent; in others, and particularly in those whose abdomen was much distended by the waters of the ovum, the space over which it was audible was many inches in diameter.

The character of this sound is peculiar. It assumes, during the course of pregnancy, as Laennec has observed, all the characters of the bellows sound. About the commencement of the fifth month,

which is the earliest period that I have had an opportunity of hearing it, the sound was characterized by a sort of rushing or rasplike noise, not unlike that produced by the action of a small file upon a thin soft board. Later in pregnancy, and during the eighth and ninth months, at which period I have heard and examined it most frequently, it is duller, and resembles very closely the sound produced by the blowing of a pair of bellows. This comparison, however, does not convey to the mind a perfect idea of the sound: it has more of a swelling tone or character, if I may so term it, than that produced by a pair of bellows: it resembles the noise of a broad dense flame, which is produced by the wind from a large pair of bellows, more than it does the simple issuing of the air from the bellows itself; or perhaps it still more perfectly resembles the noise of water as it is forced from the hose of a fire engine. This sound is always isochronous with the pulse of the mother, and varies in number and character with it. It increases and dies away in unison with the dilatation and contraction of the artery at the wrist, and its intensity was always the greatest at the moment that the impulse of the artery was greatest.

The placental sounds were always heard in the same part of the womb in the same individual, and were uniformly distinguished by the same peculiarities until the commencement of labor. But during the labor pains a new phenomenon takes place in regard to them. At the moment the pains occurred and the womb began to contract, I observed that the placental sounds became less sonorous and gradually died away as the pains increased, and finally, when these were most acute and the contraction of the uterus was greatest, they for a moment completely disappeared. When the pains are light and the contraction of the womb but partial, the placental sounds become less diffused and audible, but do not cease entirely. They diminish in intensity in proportion as the degree of pain and uterine contraction increase. As the pains cease and the uterus relapses again into its previous quiescent and dilated state, the placental sounds assume their accustomed character, and during the intervals of pain they vary in no respect from what they were before labor commenced. These phenomena I have heard repeatedly, and during many successive contractions of the womb. I have heard them in six different cases, and I want no other proof to convince me that the "simple blowing pulsation," or "placental sound" now described, proceeds from the placenta. But there are further proofs of this. The moment the child is born and the cord ceases to pulsate, the placental sound is no longer heard; and in two cases, I have immediately, on the birth of the child, and before the cord was divided, passed my hand into the womb, and ascertained that the placenta was attached to that part of the organ from which the sound proceeded.

It is said that the placental sounds can be heard as early as between the third and fourth month of gestation, and immediately after the uterus has risen above the pelvis. The earliest period at which I have had an opportunity of examining for them, was the last of the fourth, or the commencement of the fifth month. They

were audible at this period. They were occasionally intermittent, and could not during every examination be detected, until the last few weeks of pregnancy. During the ninth month I never failed hearing them distinctly whenever I searched for them. The friction of the clothes against the instrument, the noise made in the room, and the rolling of the intestines, would now and then overpower the sounds of the placental pulsations—but only for a short time. The moment these accidental causes were removed, the sounds would become as distinct and audible as ever.

In making, the “external” examinations now mentioned, the female was made to lay upon her back, and to be lightly covered with clothes. The position of the patient, however, was often changed. Sometimes I made my examinations while the female was laying on her side,—on her face,—and while standing erect,—without, however, observing any very material variation in the situation or character of the stethoscopic phenomena.

I have never been able to hear the fœtal or placental pulsations by applying the stethoscope over the loins or sacrum, or over the back part of the abdominal walls. To ascertain the state of the womb by manual pressure, I usually commenced my “searching operations” at the symphysis pubis, and, from this point I cautiously carried my fingers over every part of the abdomen. In using the stethoscope, I usually applied it, in the first instance, over the navel, so that this organ should be included within the open end of the instrument. From the navel, I moved it in every direction over the abdominal cavity. Proceeding in this manner, it was easy to discover in what region of the womb the pulsations were located, and the exact point where they were strongest and most powerful. Generally speaking, all these examinations may be made with as much facility as those of the chest can be, and with as little exposure of the patient, and without necessarily offending the delicacy even of the young and sensitive. Occasionally, however, in order to convince myself that I was not mistaken in the character of the sounds which I heard, I have been obliged to expose a part of the abdomen sufficiently extensive for the application of the instrument. But, in most cases, this was unnecessary. The phenomena were easily distinguishable through a simple covering of the clothes, as a sheet, for instance. The covering, however, should be of linen or cotton, and, to prevent any noise which might arise from friction, I have found it useful to moisten the part of the covering over which the instrument was to be applied, or to dip the end of the instrument in water previous to its application. Either of these precautions will generally render any exposure of the abdominal surface entirely unnecessary.

From the “internal” examinations, I have observed nothing in these cases which has not often been noticed and described. The neck and mouth of the womb, in the individuals that I have examined, were observed to pass through the same changes as described by most writers on midwifery, and which have been lately happily and truly delineated by Dr. Gooch in his late work, and alluded to in your Journal. The balancing of the fœtus in the liquor amnii

was frequently observed during the last three months of pregnancy. By forcing my fingers suddenly against the mouth of the thin walls of the uterus, when this organ was much distended with the waters, the fœtus could be made to rise up in them, and to fall against the fingers with an apparently rotatory motion. The impulse communicated to the child, by falling upon the fingers, would cause it to make many strong and rapid motions with its limbs, which were very distinctly felt by the hand, which was placed externally over the uterine tumor. In females whose womb contained but a slight quantity of liquor amnii, this balancing of the fœtus could not be observed. The whole womb could be made to rise up, but the peculiar balancing of the child within it was not evident.

The following inferences may justly be drawn, I think, from the preceding observations:—

1st. By means of the stethoscope it can generally, and perhaps always, be easily ascertained if the woman be pregnant with a living child; and whether she be pregnant with one or more living fœtuses.

2d. By means of the same instrument the situation of the placenta can be determined, whether in the fundus, side, or over the mouth of the womb; and—

3d. The situation of the child in the uterus may be distinguished, and the character of the presentation at birth may, at least in some cases, be foretold by means of external manual examinations.

A knowledge of the foregoing facts is important, on many accounts,—first, *in regard to the individual herself and her family.* The character and happiness of a female, and that of her family, not unfrequently suffer from false and unjust suspicions of her being with child. It is but a short time since, that two of the faculty of a neighboring county were called upon to decide the case of a trembling female, who had been accused by her friends of being pregnant, and who had been threatened with vengeance in case she proved to be. The opinion of the physicians was that the girl was pregnant, and as far advanced as the seventh month. The wretchedness of the girl was now complete, although she continued to protest that she was not and could not be in the state that she was supposed to be. Time, however, proved the innocence of the girl: the case was that of dropsy, arising from a diseased liver. Had the stethoscopic signs of pregnancy been familiar to these medical gentlemen, their opinion of the case of the female now alluded to would unquestionably have been different.

In the second place, *in regard to the physician himself.* He is frequently called upon to decide, as in the case just related, whether a woman is with child, or whether her symptoms and appearance are the result of some organic derangement. His decision is evidently of great moment, because his course of treatment would be governed by it. Cases have happened in which the operation of tapping has been resorted to, where the case was that of pregnancy instead of dropsy. If the female is pregnant with more than one child, or if the placenta should be attached to the mouth of the uterus, which I think may be determined by auscultation, then he can take

early advantage of the circumstances, and may be the means of saving the woman much pain, and perhaps of preserving her life.

In the last place, a knowledge of these facts is important *in a medico-legal point of view*. Many legal decisions, involving large amounts of property, and affecting the character and even the life of persons, may depend upon the fact of a woman's being or not being with child. Now there are, perhaps, no signs, except those furnished by the stethoscope, which can be given, in courts of justice, as unequivocal evidences of the existence of pregnancy. All those commonly described as indications of this state, may be the result of organic disease, and of causes foreign to the state of pregnancy. The stethoscopic phenomena which I have described, when they exist, must be considered as sure and unequivocal proofs of the existence of pregnancy; for they cannot be simulated by any other sounds which can take place in the womb.—*Boston Medical and Surgical Journal*.

MISCELLANEOUS NOTICES.

Questions to Physicians.—The following Questions have been proposed to physicians by the New York City Temperance Society. We shall cheerfully publish answers to them.

1. Is the use of distilled liquors, by persons in health, ever beneficial for the preservation of health, or for the endurance of fatigue or hardship?

2. What is the decision of the most approved medical authorities concerning the effect of the continued use of alcohol upon the healthy human system?

3. Does ardent spirit operate as a preventive of epidemic and pestilential diseases? or is it frequently an exciting cause of such diseases?

4. What is the effect of a frequent moderate use of such liquors, in the production or the aggravation of diseases?

5. What in developing hereditary predisposition to disease?

6. What in transmitting to posterity predisposition to disease?

7. Is the constitution of the habitual tippler affected, so as to impair his susceptibility to the operation of medicines, when he becomes diseased, and thus enable the skilful practitioner generally to detect the habit, even when concealed?

8. In what cases, to what extent, and in what way, is the face an index of the habit of drinking?

9. What is the effect of alcohol on the moral sense of those who use it?

10. What upon the intellectual powers?

11. How far does the use of alcohol destroy the susceptibility of the system to the operation of medicine, and thus prevent the cure of disease?

12. What proportion of the deaths among adults that come under

your observation are fairly attributable, directly or indirectly, to the use of alcohol? and in what way?

13. What would be the effect upon the business and practice of the medical profession, if the community were generally to adopt the principle of total abstinence?

14. To what extent is insanity the effect of intemperance?

15. Has the moderate use of alcoholic drinks a natural tendency to produce the drunken appetite?

16. Can a person who uses distilled liquor reasonably expect to avoid the contraction of an unnatural thirst for stimulus?

17. Is intemperance hereditary?

18. Is alcohol a digestible substance? or is it carried out of the system without undergoing any change in its chemical character?

19. Is the use of ardent spirits beneficial in cases of dyspepsia, or in chronic debility?

20. Is it safe to use it as a family medicine, in cases of ordinary indisposition?

21. How does the "delirium tremens" compare with the hydrophobia, in its horrors, and in its frequency?

22. What has been the effect of strong drink upon physicians themselves? What proportion of your professional brethren in this city have fallen victims to intemperance? What was their previous character and standing, for talents, attainments, and prospects of usefulness and respectability?

Dr. Depeyre Lestrad's new Work on Strictures.—Much has been written about strictures in the urethra; and, notwithstanding the numerous treatises which have appeared on those affections, it is but lately that radical methods of cure have really been discovered. A perusal of ancient writings ought long ago to have achieved that desirable end, but unfortunately it is but too much neglected; hence all which is now given as innovation, is but a repetition of what has already been said before. This is especially true of Hunter and Everard Home.

Strictures have been noticed in a particular manner as far back as the year 1550, and various sorts of caustic were then recommended for their cure. The work of Alphonso Ferri, entitled "*De Callo et Carunculis*," has left little to be desired respecting the treatment of that disease; and it is probable that, had the nitrate of silver been known at that time, the method recommended by that surgeon would not have fallen into disuse, and would have subsequently required but little improvement.

About the year 1720, Fr. Roucalli published a work on the manner of applying lunar caustic to strictures of the urethra, and nearly thirty-five years after, Hunter took occasion to employ it in that affection; and though the descriptions he has given of his instruments are to be found in the ancient authors, as well as the rules for their employment, yet that surgeon, and after him sir Everard Home, have attempted to persuade the profession that their ideas were altogether new. It is certain that cauterization is the most ancient remedy for strictures, and attempts were afterwards made to aid it

by means of dilatation; and as the caustics at first in use were difficult to be handled and produced fatal accidents, they were almost totally abandoned and given up for the dilatating process. But this latter means has not answered the expectations of its partizans; every practitioner has reason to be displeas'd with it; and it is acknowledged by both patients and physicians, that it is but a palliative.

The radical cure of strictures has been successfully attempted, both with the knife and with lunar caustic; each has its partizans and detractors. It is, however, pretty generally admitted, that the latter possesses many advantages over the other, which, though it may answer in some cases, can, in every instance, advantageously give place to the caustic, unless the stricture be situated too near the neck of the bladder, while the knife would prove dangerous where the caustic is eminently serviceable.

We are indebted to Ducamp for those beneficial innovations which have rendered the nitrate of silver so highly commendable for the cure of strictures, as the mode of its employment had, before him, been acknowledged as dangerous, and often impracticable, by the English and French surgeons. The work of this skilful operator has been translated into all the languages, and has made numerous converts among every nation. Ducamp, whose premature death has been a great loss to our science, was thereby unable to give to his method all the improvement of which it was susceptible. M. Lallemand, professor at the faculty of Montpellier, has so far succeeded in improving it, and in pointing out the dangers to be avoided in its application, that he may truly be said to deserve as much credit in that particular, as the inventor himself. His work, entitled *Observations sur le Maladies Genito-Urinaires*, to which I allude, has brought the treatment by cauterization into great repute. Notwithstanding the unexampled success of Ducamp, the disappointments which had attended the pretended discoveries of Hunter and Home, were too fresh in the memory of every practitioner. On the other hand, the veterans of true surgery, Boyer, Ronx, Dubois, &c., and other great masters, were continually representing cauterization as dangerous in its application, and in its consequences. The operations of Ducamp, modified by professor Lallemand, have been repeated by experienced surgeons, skilled in the performance of catheterism, and all have proclaimed the benefit resulting from them. Some practitioners have attempted to raise a cry of opposition, by an exposition of their own failures in following the practice of Ducamp; but what method has not had its detractors? We may say without exaggeration, that the method to which we allude, is as satisfactory as can well be expected, and that after surgeons shall have become familiarized with it, the strictures of the urethra, which have hitherto been deemed incurable in the majority of cases, will be considered of easy cure.

The works of Ducamp and Lallemand are filled with interesting observations and judicious arguments, which redound much to the sagacity and skill of their authors. Whence is it, then, that some surgeons cannot make use of their instruments with the desired success?

The reason is, in the first place, that persons may be very expert in treating certain diseases, and in performing certain surgical operations, but who, never having been able to introduce properly a catheter in a sound bladder, can much less do it successfully when the passage is obstructed by stricture. In the second place, because the method of Ducamp and Lallemand, though explained at full length in their work, is not detailed with sufficient minutæ for those who have never seen cauterization performed. In a work on strictures of the urethra, which I will shortly publish, I have used all my endeavors to convey a familiar and clear idea of that method. I have also made a few changes in the plans of both those authors, and I flatter myself that I will enable the surgeon to avoid those deviations from the proper direction of the catheter, and the other accidents arising from an improper application of the caustic. To that work I shall subjoin the history of several cases which I have treated in this city in the presence of several surgeons. Plates will also be added at the end of the volume, exhibiting a view of the instruments which I use, and the surgical anatomy of the urethra.

St. Augustine, Florida.—We give place to the following circular, in compliance with the request of the author.

ST. AUGUSTINE, November, 1829.

SIR,

The nature of the present communication will present the best apology I can offer for asking your attention to its objects. A long experience, acquired in the situation of physician to the "Infirmary for Diseases of the Lungs," established in the city of New York, led me to the same result, that all others, conversant with the disease, have arrived at; that in cases of decided character in consumption the only remedy is a change of climate. Italy, France, and the West India islands have all been resorted to; but each has peculiarities that at least have neutralized the advantages they possess. Well attested cases of the good effects of a change to the climate of Florida had been so frequently presented to my attention, that I was at length induced to try the experiment in a case in which my own feelings were deeply concerned, and with a view to a more thorough examination of the subject. I determined to visit the place myself. I am now satisfied beyond question, that this favored land of ours contains the spot that presents more advantages to the valetudinarian in consumptive cases, than any other on earth, and that this spot is the city of St. Augustine, in the territory of East Florida. Convinced that by disseminating a few facts with regard to this place, in relation to its connection with this subject, I shall be subserving the cause of humanity, I have taken the liberty of addressing to you this circular; with a request that so far as convenient, you would communicate it to those, who, within your knowledge, may be interested in the information.

The city of St. Augustine, one of the oldest places on the continent, is situated on the Atlantic coast, in about lat. 30° north. The soil around the place for miles, is a mixture of shell and sand. The houses are generally built of shell stone or wood, after the old Spa-

nish mode, with orange groves in the rear; but owing to their age and peculiarity of construction, not offering, it must be confessed, much attraction at first, to the inhabitants of the states. A large hotel, however, is about to be erected, which is intended to remedy any objection on that score. There is now in the place a catholic church, a methodist meeting house, a presbyterian church nearly completed, and measures are in train for the erecting an episcopal church. The markets present a sufficient variety of meat and vegetables. Beef, though lean, of good flavor; poultry, wild and tame turkies, and venison in abundance; and fish equal to any in the world, sheepshead, bass, mullet, whiting, crabs, turtles, and oysters—all light, easy, yet nourishing food. Among the fruits are the orange, the lime, the fig, and a great variety of kitchen vegetables. The vine, olive, and date, would also flourish, and will no doubt be shortly introduced. That it is a place in some respects not presenting all the conveniences of a large and more busy city, is certainly not to be denied; that, however, is an evil that will soon cure itself. The water too, though drinkable, is like that of most southern latitudes, rather hard. The price of board and lodging per week, is from seven to ten dollars. All the above circumstances and facts are no doubt of some importance to most persons; yet to an invalid in search of health, there are other things of far greater interest; and it is here that St. Augustine stands undoubtedly unrivalled—in air, in temperature, in physical peculiarities and advantages generally.

The climate is as equal and as agreeable the year round, as in the nature of things can be. The mean temperature by Fahrenheit, for January, in 1829, was as follows: For January, 1829, at 7 A. M. 53°, at 2 P. M. 60°, at 9 P. M. 54°; for February, at 7 A. M. 53°, at 2 P. M. 60°, at 9 P. M. 52°; for March, at 7 A. M. 53°, at 2 P. M. 63°, at 9 P. M. 54°; for April, at 7 A. M. 61°, at 2 P. M. 74°, at 9 P. M. 66°. In the summer months it ranges from 80° to 90°, but the heat is by no means as oppressive as the same height would indicate in more northern latitudes, on account of the dryness, clearness, and consequent elasticity of the atmosphere. The trade wind sets in at 10 A. M., and blows steadily until daylight next morning. There are no marshes in the vicinity, and consequently no fresh water vapors, and the frame is therefore generally braced, and the spirits in a state of exhilaration that at first is astonishing. This is no doubt the true secret of those enthusiastic and glowing descriptions of this land of flowers, that characterize all the earlier accounts of this country; and while it is one of the greatest sources of enjoyment, is also in itself a most efficient remedy. So remarkable, indeed, and so well understood, are the effects of the trade wind, that it is familiarly styled among the inhabitants, "the doctor."

The nature of the soil assists the operation of these causes. Consisting of shells and sand, it absorbs the rain that falls very rapidly, and thus prevents the rise and accumulation of vapor, and avoids the unhealthy decomposition of vegetable matter, those prolific sources of fever and disease in our own climate; and even

when occasionally the air may be somewhat damp, it is so impregnated with salt as to be perfectly harmless. One fact is worthy of particular remark, as being to consumptive patients of great importance; this is, that there is *no liability to taking cold* in this climate; no ordinary exposure is unhealthy or dangerous. This fact, however curious, is unquestionable, and is accounted for on the plainest principles. There are no sudden changes from heat to cold, nor from dry to damp. During the day the refreshing trade wind pours a steady current of air over the coast, and you retire to bed while this operation of nature is going on; instead of waking at night or in the morning, and feeling the chill of the night damp, the weather has uniformly grown warmer and milder from the gradual withdrawal of the effect of the wind, which ceases entirely about daylight. In other climates the night is almost invariably liable to be colder and damper than the day. In St. Augustine the reverse is the case, and thus the delicate lungs of a patient are relieved from the greatest sources of irritation. This it is in my opinion that constitutes the secret of the climate; it creates the most bland and uniform temperature of the atmosphere, and there are no local causes to impede its complete operation.

In accordance with this general view of the matter, the diseases which generally prevail are those of old age; palsy, apoplexy, and slight fever, from irregularity of diet. The diseases not known here are all the diseases of children, such as measles, whooping cough, scarlet fever and smallpox, intermittent and bilious fevers, except when brought from the country, and mania, except mania a potu, have never been known among 2000 inhabitants. It is a remarkable fact, that that new disease, the dengue fever, after visiting the West India islands, crossed over to the continent, and travelled as far north as Philadelphia, but omitted to pay this favored place even a passing notice. Several cases came from Charleston, but without communicating it in a single instance. The climate of this city will be found of great benefit in cases of spitting of blood, asthma, serofula, dyspepsia, and rheumatism, as well as in consumption in its different varieties. There are a number of persons who have resided here for six or eight years past free from attacks of disease, who came originally as invalids, the history of whose cases would lead me to conclude that some of them were in the last stage of consumption; others with profuse and frequent hæmorrhage from the lungs; and some with rheumatism. During the last winter there arrived here about sixty invalids of all sorts; of this number only three died. I have since heard of the death of five individuals of this number since their return to the north. Taking, then, a review of the above facts, together with the testimony of several respectable gentlemen who have passed a winter in the south of France, in Italy, and in St. Croix, and who, with one consent, prefer the climate of St. Augustine to either, we must conclude that it is far preferable for the invalid to trust to the healing qualities of this fine climate, within from six to ten days sail of his home, under the same laws, and among his own people, with whose habits and manners he is familiar, than to transport himself to a foreign land,

among strangers whose services and sympathies can be purchased only at every sacrifice, and at the risk of everything held most dear. Yours respectfully,

ANDREW ANDERSON, M. D.

The Medical Profession in Canada.—We have been politely favored, by our friend Dr. Tessier, with the perusal of the *Laws of the Quebec Medical Society*, and other documents illustrative of the rapid progress our science has been making within a few years past in Canada. The establishment of the Quebec Medical Journal, in 1826, a publication which has gained so much credit to its author in this country, as well as in his own, appears to have given an impulse which is now exhibiting itself in laudable, and, we are happy to say, successful efforts in the promotion of science. A medical society has been in existence for three years past in Quebec, which is now in the most flourishing condition; and we need mention no stronger illustration of it, than the fact that no less than thirty-six original dissertations, embracing the most important topics of medical science, have been read before that body within that space of time.

On perusing the laws of the society, our mind has been forcibly struck at the wisdom and profound sagacity which has dictated them, and to which, we are confident, the society is chiefly indebted for its success; they form one of the most complete and judicious codes of medical police we have ever read. We cannot too much admire the excellence of the following proviso: "That no proposal or motion tending to alter, destroy, or amend any of these rules and bylaws, either in their tenure, meaning, or effect, shall be proposed to this society, before the expiration of five years from this date; and any such proposal or motion then made, shall be delivered in writing, and deposited with the society for the inspection of the members during the space of three months, before the society shall proceed upon it; and such proposal or motion shall be adopted by a majority of three fourths of all the members of the society, members absent voting by proxy, or by sending their vote in writing to the secretary; and should it once be rejected by the want of such majority, it shall not be again proposed."

Whatever inconvenience may occasionally arise from the exclusiveness of this bylaw, none can be imagined commensurate with the vastly more disastrous consequences which are too often the result of a contrary provision. When we reflect on the evils which experience has shown to arise from the conflict of temporary or personal feeling in the constant alterations or interpretations of rules and bylaws, we cannot but express the hope that the older societies of our country may derive some benefit from the example set before them by their junior sister in Canada.

In addition to this flattering prospect of the profession in Canada, we are happy to find that Dr. Blanchet, of Quebec, has succeeded in passing several bills through the house of assembly of Lower Canada, for the establishment of hospitals, lunatic asylums, &c., and Dr. Labrie, of Montreal, one for regulating the practice of

physic and surgery in that country. It may be gratifying to our readers in the United States to learn that both these gentlemen, as well as Dr. Laterriere, the only three physicians in the Canadian legislature, are all pupils of our medical schools.

While adverting to these proceedings on medicine in Canada, we cannot pass unnoticed an objection made by Mr. Speaker Paineau, against granting any aid to an hospital founded in Montreal by the friends of the late governor, lord Dalhousie, on the ground that one of the bylaws of that hospital declares that no physician holding his degree from a university or college in the United States, can be eligible to the office of physician or surgeon to that establishment. On referring to the pages of the Quebec Medical Journal, for 1827, we find the same fact alluded to with that feeling of indignation which it so richly deserves; and when we take in conjunction the circumstance we have already mentioned of the three physicians in the Canadian legislature being pupils of our schools, we cannot refuse our assent to the conclusion drawn by the writer in that Journal, that the bylaw is intended to exclude the Canadian physicians from any participation in that hospital. We notice that fact not with the view to vindicate our schools from an imputation which reflects back upon its authors, who, we understand, are not more than six or eight in Canada, and not one of them a Canadian, but because we are afraid that such dispositions may throw obstacles in the way of the efforts which are now making by all our Canadian brethren, under the auspices of the Quebec Medical Society, to raise the profession to the level of the enlightened principles of our age, efforts which it will always be our anxiety and pride to lend them our feeble means in promoting.

The following are the officers of the Quebec Medical Society for the present year.

JOSEPH PAINCHAUD, *President.*

WM. A. HALL, *Vice President.*

S. W. H. LESLIE, *Secretary.*

JOSEPH MORRIN, *Treasurer.*

JOHN MAXHAM, *Librarian and Curator.*

The following is a list of the honorary members of that society, with the dates of their appointment.

July 7, 1828.	WILLIAM ZOLLICHOFFER, <i>Baltimore.</i>
“ “	EITENNE P. TACHE, <i>Canada.</i>
March 2, 1829.	JOHN C. WARREN, <i>Boston.</i>
“ “	THOMAS SEWALL, <i>Washington.</i>
April 6, “	THEODORIC R. BECK, <i>Albany.</i>
August 3, “	THOMAS DAVIS, <i>London.</i>
“ “	XAVIER TESSIER, <i>New York.</i>

State Medical Society.—This society held its annual session at the Capitol in Albany, on Tuesday, the 2d day of February, 1830. From the transactions we copy the following reports and notices:

The committee on prize dissertations, reported, that but one dissertation, and that on iodine, has been offered during the present

year. On the merits of this paper, as a valuable collection of facts, they cordially agree. But they apprehend that the virtues of the medicine have been too extensively commended. Monographs, of the kind contemplated in the prize question of the society, are, however, required; and with the explanation now given, they unite in recommending that the premium offered be awarded. Whereupon,

Resolved, That the premium of fifty dollars, offered by the society, be awarded to the author of said dissertation.

On opening the sealed packet accompanying the same, the author was found to be SAMUEL J. HOBSON, M. D., of Philadelphia.

A communication was received from the Medical Society of the county of New York, and read. Whereupon,

Resolved, That so much of said communication as relates to the approval of the present medical law, be referred to the committee, of which Dr. White is chairman.

Resolved, That the remainder of said communication, proposing a petition to the legislature, to obtain exemption from military duty for physicians; also, some legislative provision for the supply of anatomical subjects; and, lastly, suggesting that public eleemosynary institutions, endowed by the state, viz. hospitals, infirmaries, lunatic asylums, &c., should be directed by law to make annual reports of their medical practice and experience, be referred to a committee, consisting of Drs. Harrison, Ludlow, and M'Naughton.

The committee appointed at the last session to confer with a committee of the Medical Society of the City and County of New York, relative to a contemplated state vaccine institution, beg leave to report,

That a conference has been had with said committee, and the subject has been fully examined. Your committee would not trespass upon your patience by attempting to prove what few will attempt to deny, viz. the prophylactic power of the vaccine disease against that dreadful scourge to the human race, the smallpox; but would observe, that the instances of failure have in most, if not in all, cases been owing, either to improper virus, or to a total want of it at the times when most needed. Your committee believe, that to render it truly efficient, there must be some means devised to render the attainment of pure and fresh matter attainable at a short notice to every practitioner in the state. Your committee believe, that this can be done only by the formation of a state vaccine institution, where some one or more experienced and responsible physicians shall be employed, under the control of a board of managers, to whom any physician in the state may address a letter, post paid, and be assured of receiving, by return of mail, the necessary supply of matter, known to be recent and genuine, without any other expense. But such an institution cannot be sustained without some means to defray its expenses; and your committee believe, that the city of New York alone contains a population sufficient to ensure success, by furnishing a sufficient number of patients from whom the needed supply may be had. Your committee, therefore, recommend that this society unite with the society of the city and

county of New York, in a memorial and petition to the legislature, to grant a sum of money, not exceeding ——— dollars per annum., to establish such an institution. Accompanying this report are the resolutions of the New York County Medical Society upon this subject, all of which is duly submitted.

February 2d, 1830.

MOSES HALE, *Chairman.*

Dr. Pennell, from the committee appointed at the last session of the society, on the subject of licensing retailers of medicine, reported,

That the apothecaries and druggists in the city of New York, have organized themselves into a college of pharmacy, and adopted a constitution and bylaws. They have also appointed two professors, viz. Dr. Torrey, on chemistry, and Dr. Stephen Brown, on pharmacy and materia medica. I am informed by the secretary, that one hundred students are attending the former course, and about fifty the latter. It is their present intention to apply to the legislature, at the next session, for an act of incorporation. A copy of their constitution is respectfully submitted, with this report.

RICHARD PENNELL, *Chairman.*

On motion,

Resolved, That a committee be appointed to revise the system of medical ethics heretofore adopted by this society; and that said committee be instructed to report at the next annual meeting of the society.

Resolved, That Drs. Beck, M'Naughton, and Steel, be that committee.

The committee, to whom was referred the resolution "to take into consideration the best means of making a medical topographical survey of the state, and to report the outlines of a plan to be pursued in making the necessary investigations," respectfully report,

That they have carefully examined the subject, and are fully convinced of its great importance. A topographical survey of the state, if carefully executed, your committee are convinced, would throw much light on the nature and causes of many of the diseases which every now and then prove so destructive to the health and lives of our citizens. It is well known that many diseases owe their origin to peculiar states of the atmosphere, and that these states are modified by various circumstances. We consequently find that different diseases are more or less prevalent, and more or less dangerous, according to the nature of the soil, the elevation of mountains, and the direction and rapidity of streams, belonging to the sections of country in which they prevail. A variety of other circumstances, besides those mentioned, influence the character of diseases, inasmuch, that the remedies which are sufficient in one place, are not found to be adequate in another. The causes of such diversity can only be determined in a satisfactory manner, by such a survey as that contemplated. By procuring a multiplicity of reports on the several heads appertaining to a medical topographical survey, deductions can be drawn with much greater safety, than if the obser-

vations were made on a limited scale and in a small district. Your committee are of opinion, that medical science would be much benefited by making such a survey; and, furthermore, they feel confident that nothing is required to attain this desirable object, but energy and perseverance on the part of this society. The organization of the medical profession, is peculiarly favorable to such an undertaking.

Your committee are of opinion, that the best mode of proceeding, would be to commit to the medical societies the duty of making a survey of their respective counties. Committees might be appointed by them, in as many parts of the counties as might be deemed necessary, which committees could report to the societies at their general or special meetings. From the whole, a county report might be drawn up, and sent to this society. Could we thus procure a report from every county in the state, a committee of this society might be charged with the duty of examining such reports, and of arranging the most interesting facts in them, and from the whole, to make a general report, containing a digested abstract, accompanied with a topographical map of the state. It is impossible to calculate the benefits that might arise from such a course, steadily and carefully pursued. It is certain that a great many important facts, that would otherwise be lost to the profession, could thus be rescued from oblivion; a stimulus would, also, thereby be given to the activity and observation of the profession, which could not fail to redound to its honor and the elevation of its character. Such a survey, once made, would render it an easy matter for every county society, to make an annual report of the prevailing diseases during the preceding year, and the nature of any peculiarity in the symptoms observed, or in the treatment required. A repetition of such surveys, every ten or more years, would enable us to observe what influence the clearing of the country, the introduction of manufactures, of luxuries, &c., produced in the nature or number of diseases. In short, your committee are of opinion, that in this manner an invaluable fund of the most important facts could be accumulated at little trouble; and that by energetically persevering in the prosecution of this object, the society would benefit the public, and nobly discharge one of the most important duties, for the performance of which it was originally organized. Entertaining such views of the subject, your committee respectfully submit the following outlines, as the basis of the plan to be adopted.

The most important objects that require to be embraced, may be noticed under the following heads:

1. *The name of the county, its latitude, longitude, and boundaries.*
2. *Its lakes, rivers, morasses, bogs, and canals.* A knowledge of these is important, as they exert much influence upon the state of the atmosphere, particularly in respect to dryness and moisture. The direction of the principal streams, the rapidity or slowness of their currents, and the extent of country overflowed in rainy seasons, should be mentioned.
3. *Mountains.* The circumstances of most consequence in regard to them, are their elevation, extent, direction, influence upon

the currents of winds ; their geological structure, and that of the adjacent country ; the length of time they are usually covered with snow, and the streams arising from them ; whether covered with timber or naked. The kind of timber most common, might be stated. In maritime counties, it is important to know how high the tide rises, and what extent of country is laid bare at ebb tide.

4. *The nature of the soil.* It is desirable to know with as much precision as possible, the nature of the predominant soil, whether sandy, gravelly, rocky, clayey, alluvial, &c. The nature of the soil has great influence on the quality of the water, and on the greater or shorter time it is retained. The times of the year when noxious exhalations are most injurious, should be mentioned, as well as the several circumstances which seem to modify them. As public health is so intimately connected with these, any light that can be thrown upon them, cannot fail to prove useful. Any remarkable circumstances connected with the animal, vegetable, or mineral productions, should be stated. Certain diseases among cattle or insects, have been observed to precede epidemics. A peculiar gangrene has been attributed to a diseased state of rye, and it is not improbable that other diseases may be caused or modified by different conditions of other vegetable productions. The culture of rice is well known to be very destructive to life. The rearing of silkworms in Lombardy, and that of merino sheep in Spain, are said to have exerted much influence upon the character, and consequently upon the diseases, of the inhabitants. All such circumstances as are observed to affect health, should be mentioned. Also the nature and efficacy of mineral springs, and their temperature and chemical composition, so far as known.

5. *The state of agriculture.* This has great influence on the state of health, both on account of the changes it effects in the face of the country, and the more or less healthful nature of its several operations. Under this head it will be, perhaps, as proper as anywhere, to state what proportion of the land is arable, or under actual cultivation—what under timber—what pasture—what marsh. When these cannot be ascertained with much accuracy, it will yet be useful to have even an approximation ; and this is, perhaps, all that can be expected in the rapidly changing state of the country. To all this, it would be desirable to have added a map of each county, embracing merely its physical geography. From this, the number of the streams, their direction, the elevation of the mountains, hills, and ridges, &c., might be ascertained at a glance. Such a map could easily be prepared from the surveys already made and preserved in every county. A meteorological table should also be annexed to each county report, showing the variations of the thermometer and barometer, the quantity of rain that has fallen, the number of cloudy days, the prevailing winds, &c. All this can now be easily ascertained from the reports of the incorporated academies to the regents of the university ; and in counties in which there are no incorporated academies, it would not be difficult to find gentlemen whose leisure would permit them to make such observations.

6. *Inhabitants.* In respect to these, the most important circumstances to be ascertained, are—the density of the population; their houses; mode of building, and materials used; their arrangement in respect to air and light; the bedding, clothing, and furniture, particularly of the poorer classes; the supply of fuel and its kind; the occupation of the mass of the people.

7. *Diet.* The mode of living exerts an extensive influence upon the characters, as well as the kinds, of prevailing diseases. It is, therefore, desirable to know the ordinary diet of the laboring classes; the quality of the water used, and its effects upon persons not accustomed to it: the manner of bringing up children, in particular, is a matter of much interest, inasmuch as it influences the state of health throughout life. The diet during the first years of life, should be particularly stated.

8. *Morals and education.* Under this head may be introduced any observations that require to be made, respecting the influence of religious enthusiasm, intemperance in the use of ardent spirits, and various other matters.

9. *Diseases.* As the great object of medical topography is to ascertain the influence of climate, soil, different occupations, and moral and physical causes, in the production or modification of diseases, the attention of the enquirer must be particularly directed to the following: 1st. *Endemic diseases.* In the details under this head, the age, sex, constitution, occupation, and diet, of those most liable to be affected, should be stated, and the popular opinions respecting them—the mode of treatment by the people, with the prevailing opinions among the faculty, and the most approved modes of practice. 2d. *Epidemic diseases.* These present to the medical topographer very nearly the same objects of enquiry with the others; their contagious or noncontagious nature should be carefully attended to, and the proofs in support of the one or the other conclusion given.

The most common sporadic diseases should also be stated. Any remarkable cases of longevity, and a great variety of other important matters, might, with great propriety, be admitted; but your committee do not deem it necessary, at present, to give more than the principal heads, and a very imperfect outline of the various subjects on which it would be desirable to possess more accurate information. Should the society concur with the committee, it would be proper to direct a circular to be prepared in accordance with this report, to be sent to the several county societies, with more ample details on the several heads, than can be given on the present occasion. Your committee regret, that the time allowed for the preparation of the report, has not been sufficient to enable them to do that justice to the subject, which its importance demanded. All which is respectfully submitted.

JAMES M'NAUGHTON, *Chairman.*

The society proceeded to the election of officers for the current year, and the following were chosen:

Dr. JONATHAN EIGHTS, *Albany, President.*

DR. HENRY MITCHELL, *Chenango, Vice President.*
 JOEL A. WING, *Albany, Secretary.*
 PLATT WILLIAMS, *Albany, Treasurer.*

CENSORS.

Southern District.

Drs. JAMES R. MANLEY,
 JOHN C. CHEESMAN,
 EDWARD G. LUDLOW.

Middle District.

Drs. CHARLES D. TOWNSEND,
 PLATT WILLIAMS,
 JAMES M'NAUGHTON.

Eastern District.

Drs. JOHN H. STEEL,
 DANIEL AYRES,
 MOSES HALE.

Western District.

Drs. THOMAS SPENCER,
 WILLIAM TAYLOR,
 JOHN G. MORGAN.

Committee of Correspondence.

Drs. JOHN WATTS, JR., *of New York.*
 JAMES FOUNTAIN, *Westchester.*
 JOEL FOSTER, *Schoharie.*
 FREDERICK F. BACKUS, *Monroe.*
 JONATHAN DORR, *Washington.*
 JOHN HOLMES, *Herkimer.*
 T. R. BECK, *Albany.*

Committee on Prize Questions and Dissertations.

Drs. JAMES M'NAUGHTON,
 T. ROMEYN BECK,
 JOHN WATTS, JR.,
 JONATHAN EIGHTS,
 JAMES R. MANLEY.

The following gentlemen were elected Permanent Members:

Dr. MOSES HALE, *Rensselaer.*
 ALPHEUS S. GREENE, *Jefferson.*

The following gentlemen were elected Honorary Members:

Dr. ELI IVES, *Connecticut.*
 JOHN W. GLONINGER, *Pennsylvania.*

SECRET MEDICAL ASSOCIATIONS.

“Tantæne iræ celestibus in animis?”

When, in the discharge of a public duty, we called the attention of our professional brethren to the important fact, incidentally divulged in a court of justice, of the existence of a medical secret oath society, in Philadelphia, having branches throughout the United States, we little apprehended that we were about opening the sluices of personal invective and abuse, in the pages of any of our contemporaries. That the waveless calm, in which the editors of the North American Medical and Surgical Journal had hitherto pursued the even tenor of their inoffensive course, was to be disturbed, fell not within the prospect of belief. Their constitutional equanimity, which regarded right and wrong with equal

complacency, "content, when it cannot approve, to be silent for the sake of peace and charity," and which deemed the task of pointing out errors, correcting abuses, and attempting reforms, as odiously vulgar—smelling rank of radicalism, and, therefore, beneath the dignity of criticism,—this equanimity we deemed a sufficient mail against the impression of any thrust, however violent or fierce. That it should have been pierced without scarcely an effort, is truly more than passing strange. Yet such is the fact. A banner, inscribed "Medical Politics," is actually flaunting with proud defiance where the very rumor of "unsuccessful or successful war" never reached before; and under its ominous protection, the usual exposé of grievances is proclaimed to the world in no very measured terms: "Disregard of the common courtesies of life," "of the higher principles of justice and honor," a "sponsor for aspersions," "batlike vision," "vampyre propensities," cum multis aliis of the same tenor! Such are the charges preferred against the editor of this journal, for his having *dared* to copy an extract from a printed pamphlet. This extract is, however, said to contain indecent and unjustifiable attacks and notoriously false statements, and our ready credence of them is especially marvelled at.

Now, the fact is simply this: We first obtained a copy of this publication last summer, before the appearance of our second number, and were then urged to publish certain parts of it. This was declined, because we felt confident that the charges against the K. L. Society, which it promulgated, would be promptly met and satisfactorily set aside. Three months elapsed, and not a word was yet uttered in defence of the accused. They remained silent, laboring under an odious imputation, as dishonorable to themselves as it was galling to the character of the profession. To wipe it away—to exhibit its falsity—was their imperative duty, demanded of them by every consideration of honor and of respect for their medical brethren; and from this duty, no self erected standard of right and wrong, no self imposed obligation, could release them. Finding that no answer was even deigned on the part of the association, we then published the offensive extract. And our chief motive for so doing, was to give an opportunity—which could not be slighted nor passed over—for some satisfactory expositions, some undeniable refutation of the charge. If the opportunity has not been seized, to satisfy the doubts and remove the justifiable suspicions of the profession, it is owing, we still hope, to the temporary effect of exasperated feeling, and not to the justice of the imputation. A return to their usual serenity of temper, must convince the N. A. editors that, although innocence will blush indignantly at the very imputation of a fault, it writhes not with ill repressed contortions, at the charge of a public crime. It either refutes an accusation with prompt and dignified firmness, or it points silently, but intelligibly, to its *avowed* sentiments, and the *undisguised* virtue of its actions, for its best and surest defence. Evasions and retorts, recriminations and common places, will not avail. An unequivocal denial can alone satisfy that tribunal, before which every medical man, not blinded by conceit, or held in durance by disgraceful submis-

sion to a secret and new fangled code of ethics, must appear when cited—*public opinion*.

But we preceded the extract by the expression of our hope that no branch from such a parent stem, as that in Philadelphia, had existence in New York; and this—this it is, which has given most offence. This utterance induces the charge “of an unjustifiable, if not affected, ignorance of the real state of things.” We are asked if it is our intention “to claim for New York an uncommon purity of medical atmosphere, and its remarkable exemption from the storms of party, the polluted blasts of detraction, or any taint of selfish passion?” What then? Is the existence of a branch of the Kappa Lambda essentially identified with these evils? Is it to the influence of such an association that are due the long continued and ruinous contentions which have agitated and distracted the medical profession in the city of New York and, which, sedulously fomented by interested agents *abroad*, have unfortunately repressed the zeal of science, and checked the promptings of a noble and independent ambition? Of this we were not aware, until the North American editors informed us. But the evasion is too palpable, and we have not patience to dwell upon it. This wanton and unprovoked attack upon the medical character of New York deserves not a reply. The day is not far distant, when the agitations of party having subsided, and the wounds of an indiscriminate warfare having been healed, the profession in the city of New York will assume that elevated position to which the talents and the learning of its members so richly entitle it. Already is the dawning of a better and a more catholic spirit becoming perceptible amid the retreating mists of prejudice and strife. *We* the opening prospect!

To return to the real charge, darkly couched in the mystified query: Are we ignorant of the existence of a branch of the Kappa Lambda in this city? We answer, unequivocally, we are. And we have, moreover, every reason to believe that none such exists. There is, indeed, a private or secret association in this city; among its members are to be enumerated some of the most estimable men in the profession: *their connection with the Kappa Lambda has been, however, distinctly disavowed*. Indeed their own existence was only incidentally discovered, and their name remains still unknown. This circumstance would, of itself, be sufficient to point out a marked difference between them and the Philadelphia Society, of which the name and pretensions are now before the public. So much, then, for “affected ignorance.”

It may be asked of us, if we approve of a secret society in New York, while we condemn that in our sister city? We reply fearlessly—we do not. We cannot approve of any secret associations in an enlightened profession. The abstract right of individuals to form such associations will not be disputed; but their tendency and the uses to which they may be converted, are surely subjects open for discussion. In expressing our decided conviction that the former is decidedly unfriendly to the great objects of scientific improvement and general harmony, and that the latter may, by a

very little dexterous management, be made subservient to a selfish and exclusive policy, the more hateful because it labors not openly, but under a mask, we do not mean to assert that this abuse has taken place. It is against the spirit of the institution, as aristocratic and contracted in the extreme, that we enter our protest. And confident are we, that in this we are supported by the great body of the profession.

Before closing this article, we cannot, in fairness, omit to state, that the pamphlet from which we copied the extract, is alleged not to have the name of a printer affixed to it, and to have been carefully withheld from the Philadelphian public. It has been, to our knowledge, widely circulated elsewhere; and we have the authority of "the reporter" himself for asserting that he is not unknown to the editors of the *North American Journal*. We have received from him a copious defence of "the Report." But we must decline its publication, because we are unwilling to enlist in any contest respecting the trial, which was its subject, or the individuals connected with it. Our only object in noticing it at all, was to expose what we considered a grievous evil, if it existed, or if it did not, to enable the profession to be satisfied of its being the creature of an overheated imagination.

In conclusion. We shall be happy to publish a full contradiction of the statements hitherto published in relation to the *K. L. Association*. But should none such be offered, we shall continue to keep a watchful eye upon its movements, undeterred by reproaches or threats.

The Sympathetic Nerve.—Dr. J. A. Smith, in his recent lectures on the physiology of the nervous system, observed that "he believed that comparative anatomy had at length shed some light on the real use of the great sympathetic vetri-splanchnic nerve. It had been discovered," he said, "that as you descended in creation, the nerve in question became smaller and smaller, while the pneumogastric nerve, or par vagum, augmented comparatively, in the same proportion, until, finally, in the molluscous animals, the great sympathetic entirely disappeared.

"From these facts," the professor observed, "the following inferences might, he thought, be drawn.

"1st. That the great sympathetic is *not* the connecting link between organic and animal* life, since it is not essential to the existence of either the one or the other of these lives.

"2d. That as the par vagum not only gradually supplies the decreasing power of the great sympathetic, but ultimately becomes a complete substitute for it, the conclusion is unavoidable, that these nerves are to a great extent, at least, subservient to the same purpose. But the use of the par vagum is well known to be to cause the blood to be created and the food to be digested; and such, also,

* To these terms Dr. S. always objects; and he observed that he introduced them on this occasion, merely to do away more effectually the gratuitous distinction on which they are founded.

must be the principal functions of the great sympathetic. That this vessel may answer other ends in the animal economy, is possible, and from its anatomical distribution, probable; but that it is chiefly subservient to the important purposes above mentioned, Dr. S. held to be certain."—*Communicated.*

New York City Dispensary.—This useful institution is at length accommodated with a building suitable to its extensive wants, and to the character of this great metropolis. A neat brick edifice, forty feet by eighty, and three stories high, was erected during last fall, at the corner of White and Centre streets, and opened at the commencement of the present year, with the observance of appropriate solemnities. A discourse was delivered by the reverend Mr. Schroeder to a highly select audience, among whom we were happy to recognize many of our medical friends. Indeed it is to the medical profession that this charity recommends its claims with the most powerful interest. As a practical school of medicine, it ranks preeminent among the institutions of our country; and it requires only a proper exertion on the part of its medical officers, to render its advantages, as a resort of clinical instruction, palpable to the public and honorable to themselves. During the last year, *ten thousand* patients and upwards were prescribed for at the Dispensary, and the number promises to increase during the current twelve months.

The trustees of the institution intend to devote the two upper stories of the building to the purposes of public lecturing, provided their liberality is met with a correspondent spirit on the part of the public. The room appropriated for their own meetings is furnished with an extensive suit of book cases, and will be with great liberality opened for the reception of a medical library. In this room the Medico-Chirurgical and the Medical and Philosophical Societies hold their stated meetings.

N. B. Those physicians who wish to obtain the vaccine lymph, as it is constantly kept in the purest state in this institution, may procure it at any time gratuitously, by becoming annual subscribers. The amount of subscription is *five dollars only*. Many members of the profession have come forward with spirit to support and promote the interests of the Dispensary, and we hope that many others may be induced to pursue the same laudable measure.

Annual Address before the State Medical Society.—The theme of the annual address of Dr. Beck, before the State Medical Society, is not only of interest to the medical profession, but directly to the public generally. It is the *smallpox*, its history, and the possibility of its extinction. It is not necessary to say, that it is made the more interesting by the able manner in which it is treated; but we take the occasion to remark, that we had designed, before this, to have published it entire, and that we still hope to do so.

Dr. B. suggests, after reviewing the cautionary edicts and efforts of some of the European governments, to eradicate this disease by

the thorough introduction of vaccination; and we repeat the suggestion for the purpose of calling the attention of the constituted authorities to the subject, whether, in reference to this matter, our state governments guard the lives of our citizens with sufficient care—whether some regulations could not be devised to arouse the apathy of that portion of the community who are always the largest sufferers—whether the appointment by authority of medical men, particularly charged with the duty of vaccination, and preserving and transmitting the vaccine matter, and obliged to keep registers of those they attend, would not have a salutary effect; whether the promulgation of instructions, stating the dangers that threaten, the misery and mortality that may be avoided, the circumstances that prevent the complete influence of the cowpox, and the precautions necessary for its constitutional effects, is not entitled to consideration—whether, in fine, a census should not be taken of those who have not labored under one or other of these diseases, (the small or cowpox,) and they be compelled, under proper penalties, to submit to the latter.

The subject is one in which the public are deeply interested, particularly the citizens of New York and Albany, where large numbers of foreigners, in indigent circumstances, resort, and among whom, they having in most cases omitted vaccination, the mortality and sufferings are great.—*Albany Argus*.

New York Medico-Chirurgical Society.—It is with unfeigned pleasure we announce the continued prosperity of this useful association. Its meetings are now held weekly, instead of every fortnight, and the accession to its transactions is truly flattering to its future prospects. We had prepared a full account of them for this number, but want of room compels us to omit them.

BIBLIOGRAPHICAL NOTICES.

Lexicon Medicum; or Medical Dictionary; containing an Explanation of the Terms in Anatomy, Botany, Chemistry, Materia Medica, Midwifery, Mineralogy, Pharmacy, Physiology, Practice of Physic, Surgery, and the various branches of Natural Philosophy connected with Medicine. Selected, arranged, and compiled from the best Authors. "Nec aranearum sane texus ideo melior, quia ex se fila gignunt, nec noster vilior quia ex alienis libamus ut apes." By ROBERT HOOPER, M. D., F. L. S.—The Fourth American Edition, from the last London Edition, &c. By SAMUEL AKERLY, M. D., formerly Physician to the New York City Dispensary, &c. In two volumes 8vo. New York, 1829. J. & J. Harper.

We are happy to find the indefatigable and enterprising Harpers turning their attention to medical publications. That New York has not hitherto competed with Philadelphia in her encouragement of medical literature, has been chiefly owing to the want of a public spirited and enlightened publisher, who possessed means as well

as inclination to remunerate authors and editors for their intellectual labor. Talent, learning, and industry are not deficient, and a liberal patronage will not fail to elicit their successful exertions.

In the present edition, Dr. Akerly has introduced a very extensive addition of scientific matter, connected more especially with the natural diseases, and well calculated for the general and professional student. The form and appearance of this volume reflect credit on the typographical execution of the Harper press, and its very low price renders it accessible to every member of the profession.

New York Medical Inquirer.—We have received the first numbers of this periodical, which is published monthly, in a neat pamphlet form, of eight pages. Its editor is understood to be Dr. C. C. Yates, whose talents and learning are not unknown to the profession in this state. The object of the *Inquirer* is twofold—to impart medical information to the people, and to correct certain abuses in the medical profession. This combination we must be allowed to say is not judicious, and for this simple reason, that while the popular departments will hardly prove acceptable to the medical reader, the latter connected with investigations into the condition of the profession, and into the claims of its respective members, is altogether unsuited to the public taste, and unfit for the general eye. Indeed, we question the propriety as well as the policy of exacting an extra professional tribunal to judge of medical errors and medical backslidings. Not that we wish to shield ignorance, incompetency, or quackery; or to invest medicine with the mantle of mystery; but we fear that the public are still too indiscriminating in their estimate of professional character, to be impartial judges; that the conviction of any one doctor is too often made the ready apology for the condemnation of the doctors generally, and that the unnecessary obtrusion of medical disputation into a public press, only confirms a too common prejudice against the dignity and usefulness of the profession. If Dr. Yates can guide his bark safely amidst the Scylla and Charybdis of this difficult dilemma, we shall be truly pleased, and shall cheerfully note his success.

Cooper's Surgical Dictionary.—This invaluable work, now almost out of print in this country, has lately undergone an entire revision by its distinguished author, and the sixth London edition has issued from the press, dated January, 1830.

We are gratified to learn that the Messrs. Harpers, of this city, are now stereotyping this "catalogue raisonne" of surgical literature, with numerous notes and additions, by David M. Reese, M. D., of New York.

We hope and believe that the American edition will superadd the numerous improvements which the department of chirurgery has received from some of our distinguished countrymen, whose names and operations seem to be strangely unknown or overlooked by Mr. Cooper, who has thus imitated most of the transatlantic writers, in omitting everything American. We understand the work will be published in a few weeks.

Boston Medical and Surgical Journal.—As a purely scientific work for the medical reader, this spirited and instructive publication will vie in character with the best conducted hebdomadals of the great European capitals. Its original articles are generally interesting and practical, and its editorial department is conducted with impartiality and talent. We have selected from its pages an article on the stethoscopic diagnosis of pregnancy, for the present number, which will well repay attention.

Elements of the Theory and Practice of Physic, designed for the use of Students. By GEORGE GREGORY, M. D. First New York, from the third London Edition, with Notes, and a new and complete version of the celebrated Proposition of M. Broussais. By DANIEL L. M. PEIXOTTO, M. D., Editor of the New York Medical and Physical Journal, Vice President of the Medical Society of the City and County of New York, Fellow of the College of Physicians and Surgeons of the University of the State of New York, &c.

The following advertisement will explain the motives for the present undertaking.

“The present reprint has been undertaken, not from individual motives of interference with other editions extant, but from a simple desire to present the student of medicine with a more complete and perfect text of Dr. Gregory’s work than has yet appeared in this country.

“To render this edition more generally useful and acceptable, there has been appended a new version of the PROPOSITIONS OF M. BROUSSAIS, which contain a full view of the physiological doctrine, and of which no entire or accurate copy has before been submitted to the English or American reader.

“The NOTES have been added to supply a few important omissions in the body of the work, and to diffuse more generally a knowledge of certain *American* opinions and modes of practice, which deserve to be embodied into a general system of medicine.

“This volume exhibits, therefore, a condensed expose of some of the most popular medical views of the theory and practice of physic, entertained in Great Britain, France, and the United States of America.”

MR. FRANCIS has in press, “*Lectures on the Theory and Practice of Surgery.* By John Abernethy, F. R. S., &c.,” in one volume, octavo. Reprinted from the London edition, published from the author’s own notes. This edition will be very valuable to the profession, as containing a summary of the doctrines and practice of this celebrated man, published under his own authority.

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N. B. Circumstances over which we had no control, and for which we were wholly unprepared when we assumed the sole conduct of this Journal, have hitherto prevented its appearance at the stated dates. Some indulgence will be vouchsafed by our readers when they reflect that four numbers of two hundred and fifty pages have nevertheless been issued in thirteen months. The date of the Journal hereafter will be coeval with its punctual appearance.

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